Perceived Needs and Symptoms of Common Mental Disorder
Development and Use of the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale

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King's College London

Perceived Needs and Symptoms of Common Mental Disorder – Development and Use of the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale

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Thesis awarded the degree of
Doctor of Philosophy

2013

Title: Perceived Needs and Symptoms of Common Mental Disorder – Development and Use of the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale

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Abstract

Aims: To address gaps in the humanitarian needs assessment and mental health research field, the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale was developed, a valid and reliable scale to assess the perceived needs of adult populations affected by humanitarian emergencies in low- and middle-income countries.

Methods: A previously developed draft version of the HESPER Scale was pre-tested in the United Kingdom (UK) with seven refugees from the Democratic Republic of the Congo (DRC), and was then pilot-tested in small samples (122 participants in total) with displaced Iraqi people in Jordan, and with the local populations in Gaza and Sudan, to assess the scale's feasibility, intelligibility, comprehensiveness and cultural applicability, and to determine the suitability of training materials. A revised version of the HESPER Scale was subsequently field-tested in larger samples (817 participants in total) with displaced Iraqi people in Jordan, with people displaced following an earthquake in Haiti, and with Bhutanese refugees in Nepal, to assess its psychometric properties, as well as testing its application in measuring perceived needs and in providing data to predict mental health outcome.

Results: Participants during pilot-testing found the list of HESPER items to be comprehensive and relevant, suggesting face validity and content validity of the scale. During field-testing, inter-rater reliability, test-retest reliability and internal consistency of the HESPER Scale was good to excellent across the three sites. Most HESPER items correlated as was predicted with related questions of both a quality-of-life instrument and a distress scale, demonstrating criterion (concurrent) validity of the scale. The HESPER Scale was also able to provide useful data on perceived needs in the three field-sites, with few gender differences. Number of perceived unmet needs and number of past traumatic events were both associated with symptoms of common mental disorder across

settings; perceived unmet needs mediated the association between past traumatic events and symptoms of common mental disorder in Jordan, and less strongly in Nepal, but not in Haiti. Out of the HESPER Scale's 26 items, a few basic perceived unmet needs were linked to poorer mental health in all three settings; whether other perceived unmet needs, gender and age predicted mental health outcome appeared to be context-dependent.

Conclusions: The HESPER Scale is able to: a) provide rapid valid and reliable population-based data on perceived needs in adult populations affected by humanitarian emergencies, and their sub-groups; and b) provide data that predicts mental health outcome in these settings.

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Acknowledgements

The development of the HESPER Scale was a collaborative project between the Department of Mental Health and Substance Abuse at the World Health Organization (WHO) Geneva, and the Institute of Psychiatry at King's College London (KCL). Dr Mark van Ommeren at WHO and Prof Graham Thornicroft at KCL jointly conceptualized the development of the HESPER Scale.

All work described in this thesis was conducted by the author in close consultation with the main collaborator of the HESPER project at WHO, Dr Mark van Ommeren. I am very grateful to Dr Mark van Ommeren for being an incredible mentor to me throughout the project and for making the collaboration so pleasurable; I learned so much through this partnership. I am also very thankful to my supervisors Prof Graham Thornicroft and Prof Louise M Howard at KCL for their continuous advice, support and trust, without which I would not have been able to complete this thesis.

I would further like to thank all members of the HESPER project's steering committee and international advisory group, who were an important force in guiding the development of the HESPER Scale. The steering committee consisted of Dr Mark van Ommeren and Dr Andre Griekspoor at WHO, and Professor Graham Thornicroft, Professor Louise M Howard, Dr Heidi Lempp, Dr Morven Leese and Maya Semrau (all at KCL). The international advisory group consisted of Dr Paul Bolton (John Hopkins University), Mr Kaz de Jong (Medicins Sans Frontieres Holland), Dr Nadine Ezard (Monash University), Prof Richard Garfield (Columbia University), Dr Johan Heffinck (at the Humanitarian Aid and Civil Protection department of European Commission (ECHO) during the first two years of the project), Dr Lynne Jones (International Medical Corps), Dr Helen McColl (International Rehabilitation Council for Torture Victims (IRCT)), Dr Pau Pérez-Sales (Medicos del Mundo), Dr Shekhar Saxena (WHO), Dr Mike Slade (KCL), Dr Egbert Sondorp (London School of Hygiene and Tropical Medicine

(LSHTM)), Dr Zachary Steel (University of New South Wales), Dr Wietse Tol (HealthNet TPO, Yale University), and Dr Mike Wessells (Columbia University).

I am also grateful to the local collaborators in each of the seven pilot- and field-sites, who enabled data collection throughout the HESPER project. In Gaza (see Section 4.4) this was organized by Fafo Institute for Applied International Studies (Dr Åge Tiltnes and Mr Hani Eldada), and the WHO Office in Gaza (Mr Dyaa Saymah) provided advice; funding was provided by WHO Geneva and Fafo. Data collection in Haiti (see Chapters 5 and 6) was organized by International Medical Corps Haiti (Ms Isabelle Pilotte, Mr Daniel Joselito Charles, Mr Charles Lor and Mr Jason Erb). Data collection in Jordan (see Section 4.4, and Chapters 5 and 6) was organized by WHO Jordan (Dr Hashim El Mousaad, Dr Anita Marini, and Dr Nada Al Ward), was implemented by Accurate Opinion (field-testing) and the Market Research Organisation (pilot-testing), and was funded by the Jordanian Nursing Council, WHO Jordan, and the University of London Central Research Fund; the United Nations High Commissioner for Refugees (UNHCR) provided advice on sampling. Data collection in Nepal (see Chapters 5 and 6) was organized by HealthNet TPO / TPO Nepal (Mr Nagendra Luitel and Dr Mark Jordans), and funding was provided by WHO Geneva; UNHCR Nepal and WHO Nepal provided further support. Data collection in Sudan (see Section 4.4) was organized by Humanitarian Accountability Partnership (HAP International) (Ms Monica Blagescu). Data collection in the United Kingdom (see Section 4.3) was facilitated by the British Refugee Council (Ms Rachael Hardiman and Mr Alistair Griggs). My thanks also go to all interviewers, translators, interpreters and other support staff in Gaza, Haiti, Jordan, Nepal, and Sudan. My special thanks go to the interviewed participants in Gaza, Haiti, Jordan, Nepal, Sudan, and the United Kingdom.

I would also like to thank all participants in the 2008 expert survey (see Section 3.7 and Appendix E1), including Dr Alastair Ager (Columbia University), Mr F Jiovani Arias (Fundación Dos Mundos), Dr Nancy Baron (Global Psycho-Social

Initiatives), Mr Mihir R Bhatt, (All India Disaster Mitigation Institute), Ms Christina Bitar (United Nations Interim Force in Lebanon (UNIFIL)), Dr Cécile Bizouerne (Action Contre la Faim), Ms Nan Buzard (American Red Cross), Dr Jorge Castilla (WHO / Pan American Health Organization (PAHO)), Prof Fatima Castillo (University of the Philippines), Dr Alessandro Colombo (International Rescue Committee), Ms Anjana Dayal (International Committee of the Red Cross (ICRC)), Prof Joop de Jong (Vrije Universiteit Amsterdam), Dr Pamela DeLargy (United Nations Population Fund (UNFPA)), Dr Linda Doull (Merlin), Dr Carolina Echeverri (WHO/PAHO), Dr Girma Ejere (Learning and Skills Council London), Dr Nadine Ezard (LSHTM), Mr Ananda Galappatti (Good Practice Group), Prof Rita Giacaman (Birzeit University), Dr Johan Heffinck (ECHO), Dr Lynne Jones (International Medical Corps (IMC)), Dr Barbara Lopes Cardozo (Centers for Disease Control and Prevention (CDC)), Dr Amanda Melville (United Nations Children Fund (UNICEF)), Ms Carlinda Monteiro (Christian Children's Fund), Mr Charles Owusu (Christian Children's Fund), Ms Chrishara Paranawithana (WHO), Dr Jonathan Polonsky (WHO), Mr Bhava Poudyal (International Catholic Migration Commission (ICMC)), Dr Joe Prewitt (American Red Cross (ARC)), Ms Sabine Rakotomalala (Terre des Hommes), Dr Bayard Roberts (LSHTM), Dr Jorge Rodriguez (WHO/PAHO), Prof Daya Somasundaram (University of Jaffna), Dr Peter Ventevogel (HealthNet TPO), Dr Johan von Schreeb (Karolinska Institute), Dr Vivien Walden (Oxfam GB), Dr Xiangdong Wang (WHO), Dr Mike Wessells (Columbia University), Ms Wendy Wheaton (independent consultant), Mr John Williamson (United States Agency for International Development (USAID)), and Dr M Taghi Yasamy (WHO).

I am thankful to Dr Mark Jordans for conducting the mediator analyses outlined in Chapter 6 assessing the relationship between perceived needs, past traumatic events, and symptoms of common mental disorder, and for giving me permission to use the analyses in this thesis.

I am grateful to the Medical Research Council (UK) for funding me through a three-year PhD studentship grant.

Finally, I would like to thank my family and friends, in particular my parents John Austin and Barbara Semrau, for always supporting and believing in me, and for their understanding during periods of hard work.

Most of all, I would like to thank my partner, Adam Moore, for his understanding and patience over the last few years, including during my numerous field-trips abroad. Without his continuous support I would have not been able to complete this thesis, especially over the last few months after the birth of our beautiful son Arlo.

This thesis is dedicated to Arlo.

Declaration of Publications

The following research papers were published based on work contained in this thesis:

Semrau, M., van Ommeren, M., Blagescu, M., Griekspoor, A., Howard, L.M., Jordans, M., Lempp, H., Marini, A., Pedersen, J., Pilotte, I., Slade, M. and Thornicroft, G., The development and psychometric properties of the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale, *American Journal of Public Health*, 2012, 102(10):e55-e63

Jordans, M.J.D., Semrau, M. (joint first authors), Thornicroft, G. and van Ommeren, M. (joint last authors), Role of current perceived needs in explaining the association between past trauma exposure and distress in humanitarian settings in Jordan and Nepal, *British Journal of Psychiatry*, 2012, 201(4): 276-281

The following manual was published as a result of work described in this thesis:

World Health Organization (WHO) and King's College London, *The Humanitarian Emergency Settings Perceived Needs Scale (HESPER): Manual with scale*, 2011, Geneva, Switzerland: WHO

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Abbreviations

CAN	Camberwell Assessment of Need
CANDID	Camberwell Assessment of Need for Adults with Developmental and Intellectual Disabilities
CANE	Camberwell Assessment of Need for the Elderly
CAN-EU	Camberwell Assessment of Need – European version
CANFOR	Camberwell Assessment of Need – Forensic version
CAN-M	Camberwell Assessment of Need for Mothers
CANSAS	Camberwell Assessment of Need Short Appraisal Schedule
CANSAS-P	Camberwell Assessment of Need Short Appraisal Schedule – Patient-rated version
CI	confidence interval
CIDI	Composite International Diagnostic Schedule
CMD	common mental disorder
d.f.	degrees of freedom
DRC	Democratic Republic of the Congo
ECHO	European Commission – Humanitarian Aid and Civil Protection
Fafo	Fafo Institute for Applied International Studies
GHQ	General Health Questionnaire
HAP	Humanitarian Accountability Partnership
HESPER	Humanitarian Emergency Settings Perceived Needs (Scale)
IASC	Inter-Agency Standing Committee
ICC	intraclass correlation coefficient
IDPs	internally displaced persons

IMC	International Medical Corps
IoP	Institute of Psychiatry
IRA	Initial Rapid Assessment
IRCT	International Rehabilitation Council for Torture Victims
KCL	King's College London
MIRA	Multi-Cluster/Sector Initial Rapid Assessment
MRO	The Market Research Organization
N/A	not applicable
NATF	Task Force on Needs Assessment
NGO	non-governmental organization
NHRC	Nepal Health Research Council
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OPT	Occupied Palestinian Territories
PTSD	post-traumatic stress disorder
SD	standard deviation
ToT	Training of Trainers
TPO	Transcultural Psychosocial Organization
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
UK	United Kingdom
USA	United States of America
WHO	World Health Organization
WHOQOL	World Health Organization Quality of Life

CHAPTER 1

Introduction

1.1 Aims and objectives

This thesis aims to describe first the development of the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale, and second the scale's application in measuring perceived needs and in providing data that is able to predict mental health outcome within populations affected by humanitarian emergencies.

The objectives of this thesis are to:

1. Describe all developmental phases of the HESPER Scale, a valid and reliable scale to assess the perceived needs of adult populations affected by humanitarian emergencies during conflict or other large disasters in low- and middle-income countries.
2. Use the HESPER Scale as a tool to:
    - Provide data on perceived needs in three different populations affected by humanitarian emergencies.
    - Provide data on perceived needs across different sub-groups of these populations, in particular by gender.
    - Explore the relationship between levels of symptoms of common mental disorder (i.e. symptoms of depression and anxiety), current perceived unmet needs and past traumatic experiences in three populations affected by humanitarian emergencies, in particular the role of perceived unmet needs in explaining the association between traumatic exposure and symptoms of common mental disorder.

1.2 Developmental phases of HESPER Scale

The HESPER Scale was developed over three phases (also see Figure 1.1):

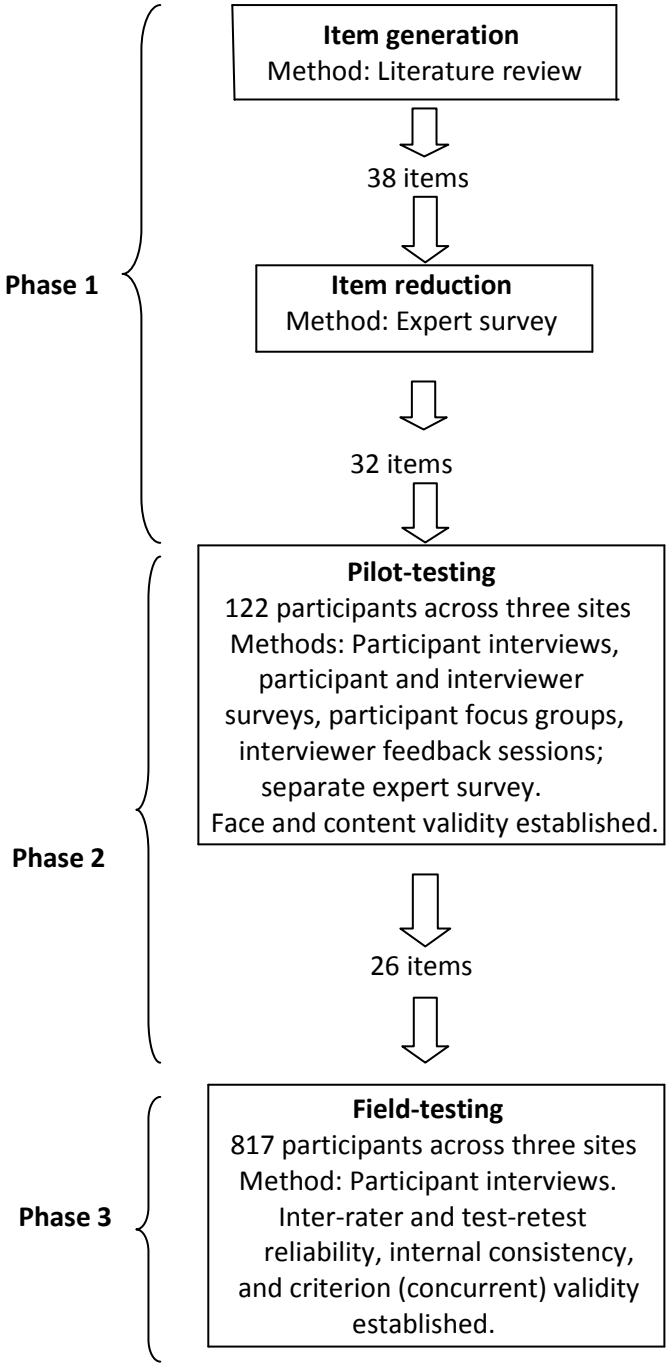
Phase 1 (2008): A first draft scale was developed through a process of item generation and item reduction, based on first a literature review, and second a survey with humanitarian experts (see Section 3.7 and Appendix E1). This phase was completed during the author's MSc in Mental Health Service and Population Research at the Institute of Psychiatry (IoP), and does not contribute towards her PhD thesis.

Phase 2 (2009): As part of the author's PhD, the draft HESPER Scale was prepared further for its subsequent pilot-testing (see Section 4.2). Following this, the draft scale was first pre-tested in the United Kingdom (UK) with refugees from the Democratic Republic of the Congo (DRC) (see Section 4.3), and was then pilot-tested in small samples in Jordan with displaced Iraqi people, and in Gaza and Sudan with the local populations (see Section 4.4), to assess the scale's feasibility, intelligibility, comprehensiveness and cultural applicability, to determine the suitability of training materials, to assess appropriate methodologies for subsequent field-testing, and to establish face validity and content validity of the scale. A small expert survey with members of the HESPER project group on the ideal length of the scale was also conducted. The draft scale was subsequently revised (including a further reduction in the number of items) in preparation for its field-testing.

Phase 3 (2010): The revised draft HESPER Scale was then field-tested in larger samples in Jordan with displaced Iraqi people, in Haiti with people living in post-earthquake displacement camps, and in Nepal with Bhutanese refugees, to assess its psychometric properties, including inter-rater reliability, test-retest reliability, internal consistency, and criterion (concurrent) validity (see Chapter 5).

During psychometric field-testing ('Phase 3'), the HESPER Scale was also used to measure the level of perceived needs in the three population groups, and to assess the relationship between symptoms of common mental disorder (i.e. symptoms of depression and anxiety), perceived unmet needs (as measured by the HESPER Scale), and past traumatic events (see Chapter 6).

Figure 1.1 Development of HESPER Scale over three phases



1.3 Hypotheses

The hypotheses employed in this thesis relate to the use of the HESPER Scale in measuring levels of perceived needs, and in providing data to predict symptoms of common mental disorder in populations affected by humanitarian emergencies (see Chapter 6). They thereby relate to the second aim of this thesis (see Section 1.1 above).

The primary hypotheses of this thesis were that:

1. Women would have:
    a) A higher number of perceived unmet needs than men, and
    b) Different perceived unmet needs compared to men.
2. Participants with a higher number of perceived unmet needs would have more symptoms of common mental disorder than those with a lower number of perceived unmet needs.
3. Participants with a higher number of past traumatic events would have more symptoms of common mental disorder than those with a lower number of past traumatic events.

Secondary research questions that were explored included:

4. How much of the relative variance in symptoms of common mental disorder could be explained by perceived unmet needs, past traumatic events and gender, and what the nature of this interaction was.
5. Whether participants with perceived unmet needs in any of the HESPER Scale's items would have more symptoms of common mental disorder than participants who reported no need for the particular item.

1.4 Summary of chapters

This thesis is generally laid out according to the timeline of the HESPER project, i.e. it follows the developmental phases of the HESPER Scale, and finishes with the application of the scale to the mental health field. Whilst Chapters 3 to 5 relate to the first aim of the thesis, Chapter 6 addresses the second aim (see Section 1.1 above for aims).

Chapter 2 provides a review of the literature relevant both to the development of the HESPER Scale, as well as its application in providing data to predict mental health outcome in populations affected by humanitarian emergencies. This includes background information on humanitarian emergencies (Section 2.2); needs and needs assessments in humanitarian emergencies (Section 2.3); psychometric methodologies within scale development (Section 2.4); and the mental health implications of humanitarian emergencies (Section 2.5).

Chapter 3 provides an introductory overview of the HESPER Scale, including its aims and criteria (Section 3.2); reasons for developing the scale (Section 3.3); the model on which it is based (Section 3.4); an overview of the scale's final structure (Section 3.5); information on how the development of the HESPER Scale was managed (Section 3.6); and previous work conducted for the HESPER project (Section 3.7).

Chapter 4 describes the development and pilot-testing of the HESPER Scale. This includes the development of the draft scale ready for pilot-testing in the field (Section 4.2); pre-testing of the draft scale in the UK with refugees from DRC (Section 4.3); and pilot-testing of the scale in small samples in Jordan (displaced Iraqi people), Gaza and Sudan (local populations) (Section 4.4).

Chapter 5 describes psychometric field-testing of the HESPER Scale in larger samples in Jordan (displaced Iraqi people), Haiti (people displaced following an earthquake) and Nepal (Bhutanese refugees).

Chapter 6 describes a study which used the HESPER Scale as a tool in measuring the level of perceived needs in Jordan, Haiti and Nepal, as well as in assessing the relationship between symptoms of common mental disorder, current perceived unmet needs, and past traumatic events in these settings, in particular the role of perceived unmet needs in explaining the association between traumatic exposure and symptoms of common mental disorder.

Finally, Chapter 7 provides conclusions to the thesis and discusses its implications. Whilst each individual chapter incorporates a 'Discussion' section with an overview of the findings and limitations of the results included in the chapter, Chapter 7 provides a more general overview of the findings, and discusses the implications of the development and application of the HESPER Scale both to the humanitarian and mental health field.

CHAPTER 2

Background

2.1 Introduction

This chapter provides a review of the literature that is relevant to this thesis. This includes:

1. A review of the literature relevant to the development of the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale, a valid and reliable scale to assess the perceived needs of adult populations affected by humanitarian emergencies (described in Chapters 3 to 5 of this thesis).
2. A review of the literature relevant to the use of the HESPER Scale in providing data on perceived needs to predict mental health outcome in populations affected by humanitarian emergencies, in particular the relationship between current perceived unmet needs, past traumatic events and symptoms of common mental disorder (described in Chapter 6 of this thesis).

This chapter aims to place the development and use of the HESPER Scale within the wider humanitarian and mental health literature. It covers the settings and populations to which the scale is applicable (see Section 2.2 on humanitarian emergencies); the wider framework within which the scale can be viewed, the reasons for developing the scale, and the gaps it intends to fill (see Section 2.3 on needs and needs assessment within humanitarian emergencies); the scientific methodologies required for the scale's development (see Section 2.4 on scale development); and the contextual background on how the scale might be useful within mental health research (see Section 2.5 on the mental health implications of humanitarian emergencies, risk factors for elevated levels of poor mental health in these settings, as well as approaches within mental health research).

2.2 Humanitarian emergencies

2.2.1 What are humanitarian emergencies?

Humanitarian emergencies can be defined as settings "in which large segments of populations are at acute risk of dying, immense suffering and/or losing their dignity" (p. 17 of [1]). They may be caused by a range of events, including natural disasters such as earthquakes, floods, tsunamis, volcanic eruptions, tropical storms, droughts, famines, landslides or epidemics [2], as well as by human-made events such as war or large-scale conflict [3]. Such catastrophic events are common; for example, the International Disaster Database (EM-DAT) by the Centre for Research on the Epidemiology of Disasters (CRED) [4] lists almost 19,000 disasters worldwide for the last hundred years, with a steady increase in reported incidences over each decade.

However, humanitarian emergencies should be separated conceptually from the events that cause them; not always do catastrophic events cause humanitarian emergencies. Poverty is the most important factor in determining both vulnerability following catastrophic events due to a lack of resources and infrastructure [2], as well as increasing the likelihood of exposure to catastrophic events, for instance because poor people may be more likely to live in disaster-prone areas [1, 2], or because low-income countries tend to host the majority of conflicts and wars [5, 6]. Humanitarian emergencies are therefore most common in low-income settings [5-7]. In line with the events that cause them, humanitarian emergencies have also been on the increase over the last few decades [8], with a five-fold rise in the 1990s alone [9].

2.2.2 Refugees and internally displaced persons

A wide range of problems are generally present in humanitarian emergencies due to the weakening of protective systems, an intensifying of the risk of problems, and the amplification of pre-existing problems such as social injustice or inequality [1]. One problem that is common is the mass displacement of

people [10, 11], with refugees or internally displaced persons (IDPs) frequently forming much, or even most, of the general population in these settings. A refugee can be defined as a person

> "who owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country"(p. 14 of [12]).

IDPs can be defined as

> "persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalised violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognised State border" (p. 13 of [13]).

Whilst refugees are protected under international law, this is not always the case for internally displaced populations [11, 14].

By the end of 2009, there were a reported 43.3 million people forcibly displaced due to conflict, violence or persecution worldwide (the highest figure since the mid-1990s), including 15.2 million refugees, 27.1 million IDPs, and almost one million asylum seekers [13, 15]. A further 25 million people were internally displaced due to some natural disaster in 2007 [16]. This means that almost 1% of the world's population are refugees or other displaced persons [16], of which 80% live in low-income countries [15], most often in countries neighbouring their own [17]. Whereas the number of IDPs has increased steadily over the last couple of decades, with around 17 million in 1997, the number of refugees has remained more stable fluctuating between 13 and 16 million in the years between 1997 and 2009 [13]. Refugees are generally equally divided by gender, with around half being female and half male, and the majority (around 59% in 2009) are over 18 years old [15].

Refugees or other displaced persons may live across a variety of settings, either in identified sites (such as camps), or widely dispersed across towns or regions [13]. The number of refugees living in urban areas outnumbered those living in camp settings for the first time in 2007 (primarily due to the large number of Iraqi refugees living in urban areas), and the gap has been increasing ever since. By the end of 2009, an estimated 58% of the world's refugees lived in urban areas and 30% lived in camp settings. Although 6.8 million people were newly displaced in 2009 across at least 23 countries [13], 5.5 million refugees (over one third of all refugees worldwide) were living in protracted situations (i.e. had been in exile for five years or longer) across 21 host countries [15], illustrating that humanitarian emergencies and the mass displacements that go with them often do not have quick solutions.

2.3 Needs and needs assessments in humanitarian emergencies

2.3.1 What are needs?

The concept of need, and the assessment of needs, is complex [18], with there being a lack of consensus about a suitable definition within the humanitarian field and elsewhere [19]. Even the Oxford Dictionary is not able to offer one single definition of need; its definitions include “circumstances in which something is necessary; necessity”, “a thing that is wanted or required”, and “the state of requiring help, or of lacking basic necessities such as food” [20].

Within the humanitarian field, needs are commonly broadly considered to be either of an ‘objective’ or ‘subjective’ nature. Whilst ‘objective’ needs usually relate to data that is pre-defined by outsiders such as mortality or disease data, ‘subjective’ or perceived needs are ones that are defined by the local population. It is these perceived needs that are relevant to this thesis. Perceived needs are defined here as needs which are felt or expressed by affected people themselves, and are problem areas with which they would like help.

Needs, and perceived needs in particular, have often been linked to quality of life, in that the fulfilment of needs is one of the aspects essential to a person’s satisfactory quality of life and well-being [21, 22]. For instance, it has been shown that higher patient-rated perceived unmet needs amongst mental health patients are associated with, and even cause, lower perceived quality of life, and that addressing unmet needs can lead to an improvement in quality of life [23]. A study across 123 countries also reported that the satisfaction of needs was consistently associated with subjective well-being [24].

It is plausible that at least some of the basic needs which people have across cultures may be comparable, regardless of the person’s culture, social status, gender and so on, for instance those relating to water, food and shelter. However, it is also plausible that whilst there are some needs that may be universally applicable, there may be others which may be specific to the

particular situation [25, 26]. People living in humanitarian settings, for example, may have some needs which would not be relevant in all other environments, such as ones relating to information about the crisis situation or missing family members. Furthermore, certain sub-groups in a population may have particular needs in addition to the needs experienced by the population at large. Women, for instance, are one of the groups who have most commonly been reported to have specific additional needs in humanitarian settings, which may often be unmet, such as ones relating to pregnancy and child birth, family planning, sexual or domestic violence, childcare, or cooking [27-31].

2.3.2 Maslow's hierarchy of needs

An early famous theory that related needs to human motivation is Maslow's hierarchy of needs [32]. This distinguished between five different levels of needs: physiological needs, as well as needs relating to safety, love, esteem, and self-actualization. These levels have subsequently commonly been represented in the shape of a pyramid, with physiological needs making up the largest group at the bottom of the pyramid, self-actualising needs forming the smallest group at the top of the pyramid, and needs relating to safety, love, and esteem forming layers in-between. Maslow proposed that each higher level of need (i.e. each higher layer of the pyramid) would emerge as and when the more basic levels of need were satisfied (with some room for flexibility); for example, needs relating to safety would emerge if (and only if) physiological needs were met, and those relating to love would only emerge if those needs relating to safety as well as physiological needs were met.

Even though there has been a lack of empirical evidence to support Maslow's hierarchy of needs [33], the theory has been very influential across a range of disciplines including – when considered broadly – in the humanitarian field [34]. Even though the theory is not often used directly anymore in the humanitarian field, the concept of there being different levels of needs that can be

represented by a pyramid (with basic needs at the base) has variously been applied in the humanitarian literature. A pyramid has also been used to represent the support structures necessary to address particular needs, for instance within the influential Inter-Agency Standing Committee's (IASC) *Guidelines on Mental Health and Psychosocial Support in Emergency Settings* [1] (see Section 2.3.3 below).

2.3.3 The mental health and psychosocial framework

In recent years, in the humanitarian field there has been a move to consider mental health needs, and the support structures that aim to address these needs, in broad terms. An integrative 'mental health and psychosocial support' approach is now often advocated in humanitarian settings, which incorporates a range of social (non-medical) programs, as well as more specialized mental health interventions [1, 35-40]. The World Health Organization (WHO) is just one of several agencies which, along with others, have called for a refocusing of mental health interventions in humanitarian emergency settings towards a broader framework incorporating not only mental disorders such as post-traumatic stress disorder (PTSD) but also the non-pathological distress found in a large part of the population (whilst acknowledging that some affected individuals will recover over time on their own without specific outside help) [1, 35-39, 41-46] (see Section 2.5.1 for further details on the mental health implications of humanitarian emergencies, and Section 2.5.3 for details on approaches within the humanitarian mental health research field). Indeed, the WHO's broad definition of health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [47] points towards this holistic mental health and psychosocial approach.

Whilst definitions vary hugely for the notion of mental health and psychosocial support, in the widely endorsed IASC Guidelines [1] it is defined as "any type of local or outside support that aims to protect or promote psychosocial well-being

and/or prevent or treat mental disorder" (p. 1 of [1]). Within the IASC Guidelines [1], mental health and psychosocial needs are seen to be diverse, and may be either predominantly psychological or social in nature (though these are highly inter-connected) [1]. Needs may either be related to:

- Pre-existing problems, for instance a mental illness which predates the emergency, such as pre-existing alcohol dependence or severe mental disorder, or pre-existing social problems such as poverty, discrimination or political oppression.
- Emergency-induced problems, for instance non-pathological distress, grief or common mental disorder, or social problems such as family separation, the disruption of social structures, or increased gender-based violence.
- Humanitarian aid-induced problems, for instance sources of stress in a newly set-up camp, the undermining of community structures, or anxiety due to a lack of information about food distribution.

A person may thus experience trauma- or loss-induced psychological distress, but at the same time may, for instance, also suffer severely due to a perceived lack of security and experiencing psychosocial needs related to water and sanitation (for instance if the available toilet facilities are in an insecure location, or in such state that they undermine people's experience of dignity).

Within the framework of the IASC Guidelines [1], a successful mental health and psychosocial support structure is viewed as being formed out of "a layered system of complementary supports that meets the needs of different groups" (p. 11 of [1]), which – as with Maslow's hierarchy of needs – can be portrayed by a pyramid (see Figure 2.1). Whilst basic services and security (including security, adequate governance, and services that address basic physical needs, such as food, water, shelter, or basic health care) are considered to be important to the well-being of all people in a population, community and family supports (such as family tracing and reunification, livelihood activities, or youth clubs) and focused non-specialised supports (for example psychological first aid, or individual, family

or group interventions by community workers) are thought to be relevant to the well-being of a smaller group of people in the population, and specialised services (such as psychological or psychiatric supports for people with severe mental disorders) are considered applicable to an even smaller part of the population. However, unlike within Maslow's hierarchy of needs, each layer is considered equally important, and support structures within the different layers should be implemented simultaneously.

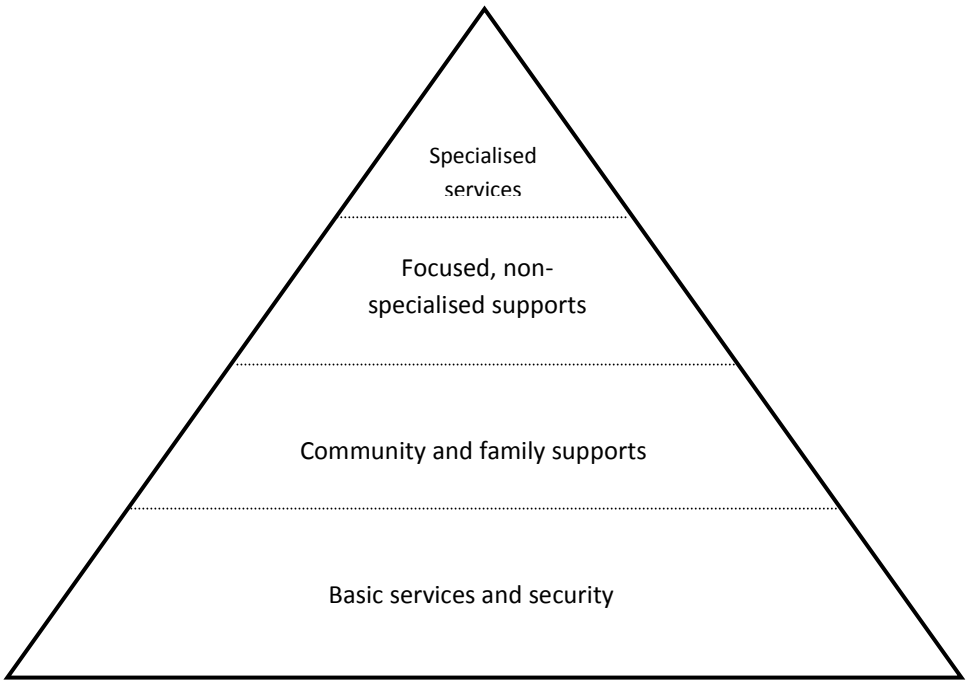


Figure 2.1 Pyramid of mental health and psychosocial support structures, as portrayed in the IASC Guidelines [1] (approximate representation).

This broader 'mental health and psychosocial' framework has a bearing on the assessment of mental health needs in humanitarian settings, in that it promotes a wider range of needs to be assessed, i.e. not only those directly relating to a person's mental health, but also other wider psychological and social issues.

2.3.4 Current needs assessments in humanitarian emergencies

Generally, humanitarian action is concerned with reducing suffering and preserving human dignity, by addressing direct threats to people – and their underlying causes – in terms of protecting their lives, health, subsistence and physical security [48-50]. Due to many countries' inability or refusal to assist those affected by humanitarian emergencies, there have been increasingly more response efforts from the international community [16], with more agencies than ever before now being involved in emergency relief efforts. Over the last 30 years, funds for emergency relief have also doubled over each decade [51]. One agency that is prominent within humanitarian emergency response is the United Nations High Commissioner for Refugees (UNHCR) [52], which by the end of 2009 was providing support to around two thirds of refugees and IDPs worldwide – 10.4 million and 15.6 million respectively [15]. Even so, in many humanitarian settings there is still a large disparity between what is needed and what assistance is received, not least because commonly there is a lack of information on needs available to decision-makers due to information not having been collected adequately or even at all [48, 49].

Needs assessments are therefore vital within humanitarian response to identify the needs that are present in an affected population, and to inform the relief efforts. The WHO and other humanitarian agencies have indeed recommended that a prioritisation of rapid needs assessments to determine problems that exist within emergency-affected populations is essential in enabling effective and efficient emergency relief [35, 50, 53-56]. Needs assessments are important within humanitarian response in guiding decisions on whether to intervene, the nature and scale of the intervention, the prioritisation and allocation of resources, and the design and planning of programmes [48, 49].

Considered broadly, current humanitarian needs assessments can be distinguished according to two dimensions: first whether they measure 'objective' or 'subjective' needs (in line with how needs are conceptualised in the

humanitarian field; see Section 2.3.1), and second whether population-based representative (probability) samples or non-probability samples are employed, i.e. differences in sampling methodologies. Whilst a representative sample can be defined as "a random sample, whereby each member of the population has an equal chance of being selected for the sample" (p. 69 of [57]), a non-probability sample can be defined as one that is "gathered in a process that does not give all the individuals in the population equal chances of being selected" [58]. Two common types of non-probability sampling techniques are convenience sampling, in which participants are selected because they are easy to access, and purposive sampling, in which participants are chosen with a specific purpose in mind, based on the judgment by members of the research team that they are suitable for inclusion into the study [58].

At present, in the humanitarian field most population-based (probability) quantitative assessments are of 'objective' indicators [59, 60], such as mortality rates, malnutrition rates or livelihood data, which are commonly used in assessing the degree of the severity of an emergency, in following trends and in decision-making, including the allocation of funds [9, 61]. Such quantitative assessments generally have the advantage of rapidly acquiring data, which can aid the immediate humanitarian response and emergency relief [62], as well as being relatively cheap, and data analyses being fairly straightforward [63]. However, the 'objective' indicators used in the humanitarian field are often defined by outsiders (i.e. non-members of the affected population) and do not quantify the prevalence and distribution of needs as perceived by members of the population themselves.

Conversely, in the humanitarian field, 'subjective' or perceived needs are currently primarily assessed mostly through rapid participatory assessments, which tend to involve gaining qualitative data from selected stakeholders using non-probability samples, for instance through focus groups or key informant interviews [64-66]. These methods involve gathering open-ended responses from

participants, either through group discussions (focus groups), or through individual interviews with (usually) purposively selected participants (key informant interviews). Although certainly valuable in providing in-depth data, such rapid participatory assessments cannot provide a population-level picture.

Despite the importance of humanitarian needs assessments, at least until recently, these were largely uncoordinated across humanitarian organizations, and assessments were generally conducted individually by agencies each using their own methods and instruments; standardised measures that could be used across humanitarian organizations and sectors were lacking overall [51]. For instance, there are still considerable discrepancies across different humanitarian organizations in terms of which particular 'objective' indicators are used (for example maternal mortality rates versus water availability, or immunization coverage) [67], though there have been some useful initiatives within sectors to standardise indicators across agencies. These include the WHO's inter-agency Health and Nutrition Tracking Service (HNTS), which aims to review, analyse and validate health and nutrition indicators and measures [68], as well as the Standardized Monitoring and Assessment of Relief and Transitions (SMART) methodology [69, 70], which is a survey method initiated in 2002 to assess the severity of a humanitarian emergency based on two health indicators – nutritional status of children under five, and the mortality rate of the population. The Centers for Disease Control and Prevention (CDC) and the World Food Programme (WFP) have also published a manual on issues relating to the standardization of survey methodologies within nutrition and mortality surveys [71].

Furthermore, in the last five to ten years, there have been some efforts to develop standardised inter-agency multi-sectoral needs assessment methods, i.e. instruments to assess needs across the different sectors (or clusters) along which the humanitarian response is organized, such as health, food security, protection, education, or nutrition clusters [72]. Two tools that stand out are the

Initial Rapid Assessment (IRA) tool [73, 74], instigated in 2006, which provides a template for multi-sectoral rapid needs assessments in the early phases of a sudden-onset humanitarian crisis based on 'objective' indicators such as health or nutrition data, as well as the Multi-Cluster/Sector Initial Rapid Assessment (MIRA) manual, which followed on from the IRA tool and was drafted in 2011/2012 by the Inter-Agency Standing Committee (IASC) Task Force on Needs Assessment (NATF) [75]. The NATF promotes and coordinates humanitarian needs assessments across agencies and sectors to strengthen informed decision-making and to improve humanitarian response; the MIRA was developed by NATF to enable strategic priorities to be identified during the first few weeks of a humanitarian emergency. Importantly, the MIRA manual has incorporated parts of the work described in this thesis into its manual (see Section 7.3 for further details), highlighting that this work fills gaps in the humanitarian needs assessment field (see Section 2.3.5 below).

2.3.5 Gaps within humanitarian needs assessment

Prior to the work described in this thesis, there were at least three important gaps within the humanitarian needs assessment field, which could be addressed through the development of a new scale. First, there had been repeated recommendations for the use of perceived needs as key indicators for project design, monitoring, and evaluation [1, 8, 48-50, 56, 65, 76-78], and for the increased participation of affected populations in humanitarian assessment and emergency response [1, 79-81]. Participation is now seen as essential in avoiding mistakes in resource allocation, in programme design, accountability, population empowerment, and for supporting psychosocial well-being. It ensures that interventions are based on needs as expressed by the affected population. Indeed, in a recent ranking exercise for research priorities in humanitarian settings, three of the ten most highly prioritized research questions included the participation of affected populations; the identification of affected populations' stressors was ranked as top priority [82]. A study after the earthquakes in El

Salvador in early 2001 also showed that affected populations' coping strategies benefited and their psychological vulnerabilities were lessened when their capacities, dignity and participation were considered [8].

Related to the notion of participation is the concept of accountability within the international humanitarian response, including that humanitarian action should be accountable to affected populations [81]. In recent years there have been concerns raised about inconsistencies in the provision of aid and a lack of accountability of humanitarian agencies [83], with aid often not being delivered where it is needed most. The 2004 tsunami is possibly the best example where even though communities were flooded with emergency relief in what has been called the 'second tsunami', a large chunk of this aid did not appropriately address local needs and capacities [54, 84].

In response to unsatisfactory aid provision in Rwanda in 1994, various humanitarian quality and accountability initiatives have been set up, of which the Sphere Project [85, 86] is probably the most well-known and influential; it aims to develop universal minimum standards in humanitarian disaster response and assistance. Other projects and publications include People in Aid [87], the Humanitarian Accountability Partnership (HAP) [88], ALNAP [80], and the *Good Enough Guide* [89]. The international humanitarian community's focus on participation is exemplified by the fact that the Sphere Handbook [86] emphasizes the involvement of affected people. Participation is recommended throughout the assessment, design, monitoring and evaluation programme cycle [1, 80, 81, 86]. The standards recognise the importance of taking disaster-affected populations' capacities and skills into account as well as their own perceived needs.

However, humanitarian workers currently have some difficulties in conducting population-based mental health needs assessments based on perceived needs. The IASC Guidelines [1] (see Section 2.3.3 for further details) are consistent with

multi-sectoral assessments of perceived needs to identify people's sources of stress, and recommend participatory multi-sectoral needs assessments. Similarly, humanitarian agencies and experts have recently advised for rapid assessments to be conducted across a broad range of sectors to provide an overview as basis for prioritising need within and between sectors [48, 49, 77], and for an integration of mental health and the psychosocial into a wider framework of well-being and recovery across all sectors [39, 45, 78, 90] (see Section 2.3.3 for further details). However, the question of how to do population-based perceived needs assessments has not been successfully addressed yet within this 'mental health and psychosocial' framework. Previous multi-sectoral needs assessment instruments such as the IRA tool mentioned in Section 2.3.4 above, for example, were not able to generate data on perceived needs, but rather used 'objective' indicators (for instance nutritional, health, food and shelter indices) to measure levels of need.

Second, recent studies tend to focus mostly on the epidemiology of mental disorders in populations exposed to humanitarian emergencies. In such environments the concepts of disorder and distress are easily conflated, and many of these studies' limited scope, utility and validity have been criticized [1, 41, 91-93]. A key question in the humanitarian field is the extent to which the distress or disorder within an affected population results from either events that have already occurred (i.e. trauma or loss), or those arising from the recovery environment (for example stressors in the current context) [36, 94-96] (see Section 2.5.3 for further details). A scale that measures perceived needs would give researchers a tool to answer this key question, and would inform mental health and psychosocial support policy and practice.

Third, with a few exceptions [97-99], existing humanitarian needs assessment tools typically have unknown psychometric properties, with the analysis of reliability and validity so far not having been successfully applied to multi-sectoral humanitarian needs assessments. Humanitarian methods of assessment

have often been found to be inaccurate or biased [50, 60, 61], and humanitarian agencies have been criticised for conducting needs assessments in relation to their own potential programmes rather than being based on standardised methods [49, 50, 60]. Consequently there have been recent calls for standardised and more consistent evidence-based approaches to humanitarian population-based needs assessments and emergency response [35, 45, 49, 60, 100-102]. Standardised needs assessment instruments indeed have the advantages of allowing for the comparison of needs across different settings and time, facilitating cost-savings associated with instrument design, as well as enabling aggregation of information on needs to a population-level [18]. Although there have been some attempts to design rapid quantitative assessment tools [8, 62, 74], a standardised psychometrically robust assessment instrument for the perceived needs of affected populations across humanitarian settings has still been lacking.

2.4 Scale development

To develop a new standardised psychometrically robust quantitative scale that assesses the perceived needs of populations affected by humanitarian emergencies (as was previously lacking in the humanitarian field; see Section 2.3.5), a range of scientific techniques were necessary. Rigorous procedures are essential within scale development, to ensure that the instrument being developed generates accurate and useful data. In general, the following steps are fundamental to the development of a new scale [103]:

1. Background research and literature review to identify whether a scale exists that adequately measures the concept in question. A new scale should only be developed (steps 2 to 4), if no satisfactory other scale exists.
2. Development of a first draft scale, i.e. the generation and selection of items into the scale, as well as choosing a scaling and scoring method.
3. Pilot-testing of the scale within relevant populations or expert groups to ensure that the included items are intelligible and unambiguous, and the subsequent rewriting or discarding of items which do not meet the relevant criteria.
4. Psychometric testing of the scale within relevant populations.

Psychometric testing of a new scale (step 4 above) is essential in order to ensure that the scale is able to accurately predict some variable in a population [103]. Psychometrics as a discipline was originally developed by psychologists, but is now widely applied in a range of disciplines (including engineering, general medicine, and health economics), whether or not the instruments measure underlying psychological constructs. However, prior to the project described in this thesis, psychometrics had never been applied to multi-sectoral humanitarian needs assessments (see Section 2.3.5).

Psychometrics generally involves testing whether a scale is reliable and valid. Whilst reliability can be defined as "an index of the extent to which measurements of individuals obtained under different circumstances yield similar results" (p.7 of [103]) (i.e. whether the scale produces stable or consistent results), validity measures a scale's ability to accurately measure what it aims to measure. When developing a new scale, it is important to measure both its reliability and validity, as – though both are necessary – neither of them are sufficient on their own to report on a scale's adequacy [103, 104]. What is more, the psychometric properties of a scale should be re-assessed each time it is used in a different context or amongst a different population group, as the reliability and validity of a scale depends on the circumstances within which it is being tested [103, 105]. However, in practice, validity is commonly underreported within research compared to reliability [106], and in the humanitarian field in particular instruments are rarely revalidated for the culture or language in which they are being used.

Two important measures of reliability are test-retest reliability and inter-rater reliability. Test-retest reliability measures the extent to which interviewers gather consistent responses over time, whereas inter-rater reliability estimates the extent to which the results of an assessment are likely to vary across interviewers. Internal consistency is a further, though weaker, indicator of reliability; it measures the extent to which the individual items included in a scale correlate with each other by producing the average of the correlations between the individual items [103]. Internal consistency is of particularly limited value for scales in which the individual items are causal indicators, rather than effect indicators, to the overall concept being measured, i.e. scales in which the individual items define the concept being measured rather than being defined by the concept [103, 107]. Instruments for which this can be the case include those measuring needs, quality of life, or stressful events, where the items may not be causally related to each other.

There is a range of different ways in which to measure a scale's validity. One way is to measure the criterion validity of a scale, which assesses the strength of the relationship (i.e. correlation) with a measurable external criterion [105], usually an accepted 'gold standard' (if there is one). There are two types of criterion validity: concurrent validity, in which the new scale and the criterion measure against which the new scale is being compared are administered simultaneously (for example two depression scales); and predictive validity, in which the criterion becomes available at some point in the future (for example University pass scores following an admissions test) [103, 108, 109]. Construct validity is a further type of validity-testing that includes several sub-types and approaches; it generally assesses whether the new measure of a construct fits in with a particular hypothesis about the construct in question, and is applicable when some theoretical construct is being measured (see [103] for a more detailed discussion on this; see also [105, 108, 110]). Other types of validity include the closely related face validity and content validity, which involve judgment of whether a scale – on the face of it – appears to measure the concept in question (face validity), and whether the scale includes all relevant content, i.e. all important domains or items (content validity) [109]. Face validity and content validity should ideally be assessed by the judgment of relevant population groups whether the scale is fit for purpose [103]. A common way in which to establish these two types of validity is for members of the affected population to evaluate the intelligibility of items and to suggest changes to the wording of items (face validity) [111], or for them to report on the comprehensiveness and suitability of items (content validity) [109].

In addition to psychometric testing, whenever a scale is being translated or used within different cultures, the accuracy of the scale needs to be ensured by paying attention to its item equivalence, which refers to whether items are appropriate and comparable across different cultures, and semantic equivalence (also called functional equivalence), which involves the correct linguistic translation of items and concepts [111].

2.5 Mental health in humanitarian emergencies

2.5.1 Mental health implications of humanitarian emergencies

As is the case in most populations, the distribution of mental health states in emergency-affected populations can be – yet again – represented as a pyramid (see Figure 2.2); the largest group displaying no or non-pathological distress levels is positioned at the bottom of the pyramid [1, 43], the smallest group with severe mental disorders (including psychosis, dissociative, personality or seriously disabling mood, anxiety and stress-related disorders [1, 112, 113]) at the top, and those with a wide spread of mild or moderate mental health problems in-between (such as post-traumatic stress disorder (PTSD), depression including suicidal behaviour, anxiety disorders such as generalised anxiety disorder or panic disorder, substance misuse [114], as well as culture-specific syndromes [5, 35, 42, 43, 112, 115-120], and somatisation, which entails physical symptoms of pain without immediate medical cause [6, 43, 112, 118, 121]). Co-morbidities between disorders are also frequent [38, 118].

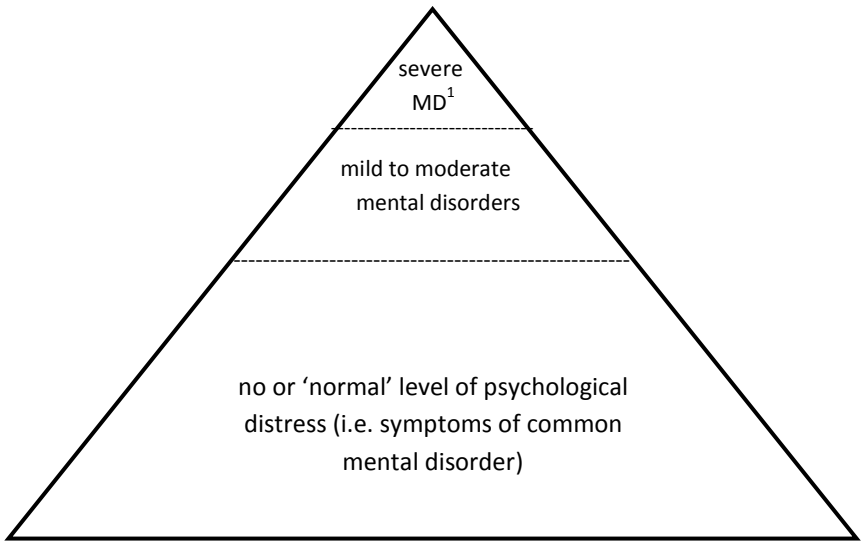


Figure 2.2 Mental health states in humanitarian emergencies
Surface areas do not accurately represent prevalence rates.
[1] MD: mental disorders

By no means will everybody affected by a humanitarian emergency develop a mental disorder [1]. Most people living in humanitarian settings show an incredible resilience and ability to cope with their situation [10, 118], and retain a relatively balanced mental state through psychological protective factors (such as positive coping mechanisms), as well as social, economic and spiritual ones (for example extended family and community support, or prayer) [1, 10, 115]. These individuals may experience a 'normal' level of distress in terms of cognitive, emotional, physical, or behavioural symptoms, without necessarily developing serious or long-term mental health problems [38, 43, 122]. This non-pathological distress may generally be characterized by symptoms of common mental disorder, i.e. symptoms of depression and anxiety. This has been reported to affect around 50% to 75% of emergency-affected individuals [123] (though prevalence rates are difficult to measure due to the lack of a diagnostic cut-off score), and may be mild resolving in a few days or weeks, or moderate to severe improving over a longer time period [38].

Even so, amongst populations affected by humanitarian emergencies the prevalence rates of mental disorders do tend to be higher compared to other populations, though prevalence rates vary hugely between studies and settings [1, 35, 42, 116, 118, 120, 124, 125], in particular for PTSD [5, 35, 115, 116, 119, 120, 126]. A large meta-analysis, for instance, found that prevalence rates for PTSD were reported to range between 0% and 99% across studies for populations exposed to mass conflict and displacement (the rate across studies was 31%) [120], whilst a systematic review amongst refugees resettled to Western countries reported rates of between 3% and 44%, with a prevalence rate of 12% across studies [117]. Similarly, whilst prevalence rates for PTSD were found to be around 36% to 37% in two separate studies of both Iraqi refugees claiming asylum in the Netherlands [127], as well as amongst the local population in Juba in Southern Sudan [128], a study amongst displaced persons during an armed conflict in Nepal found much higher rates of 53% [129]. A meta-

analysis of Bhutanese refugees in Nepal conversely reported prevalence rates for PTSD of between 25% and 33% [130].

Likewise, although depression is usually the mental disorder reported to be the most common in emergency-affected populations (as is also the case in most other populations), prevalence rates for depression and other common mental disorders such as anxiety vary widely between studies and settings. For instance, within the meta-analysis and systematic review already mentioned, prevalence rates for depression varied between 3% and 86% amongst conflict- or displacement-affected populations (the rate across studies was 31%) [120], and between 2% and 18% amongst refugees living in Western countries (7% across studies) [117]. Other studies have reported prevalence rates for depression and anxiety of 35% and 22% respectively amongst Iraqi refugees in the Netherlands [127]; of 2% and 4% respectively amongst Bhutanese refugees in Nepal [130]; and of 80% and 81% respectively amongst people in Nepal who were displaced due to armed conflict [129]. Another study in Southern Sudan found that 50% of respondents met the symptom criteria for depression [128]. A further meta-analysis found that common mental disorder was around twice as prevalent amongst refugee populations living in various host countries including many Western countries compared to economic migrants (around 40% versus 20% respectively) [131].

Conversely, prevalence rates for severe mental disorders tend to be consistently elevated by around 1% above the baseline rate of 2% to 3% in humanitarian emergency settings [1, 112, 113] (though baseline rates can vary across population groups from different countries [132]), either because the events associated with humanitarian emergencies may trigger severe mental disorders in some individuals, may bring about a relapse in those who have had a mental disorder previously [119], or may exacerbate symptoms amongst those with an already existing serious mental disorder [113].

Some of the large variations across settings in reported prevalence rates of mental disorders such as PTSD, depression and anxiety are likely to be due to the different methodologies employed by studies [117, 120, 133]. A recent meta-analysis, for instance, found that a large percentage of the variance in prevalence rates of PTSD and depression (around 13% and 28% respectively) was due to methodological differences between studies, with those studies that employed non-random sampling, small sample sizes and self-report questionnaires generally reporting higher prevalence rates [120]. A further systematic review also found that studies with larger sample sizes and more rigorous designs reported lower prevalence rates [117]. An array of techniques and instruments have indeed been used between studies, with instruments often not being adequately adapted and validated for the culture in which they are being used [45, 97, 112].

An extensive amount of literature has also discussed what was originally termed the 'category fallacy' by Kleinman in 1987 [134]; that is, whether Western diagnoses of mental disorders (such as according to the *International Classification of Diseases (ICD)* or the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*) are culturally valid, clinically relevant, and therefore of any use or possibly even detrimental in non-Western countries [5, 6, 38, 39, 41, 45, 90, 135, 136]. PTSD has featured most prominently in this debate in recent years, with there still being wide disagreement on the issue [39, 45, 90, 137]. At the extreme end of the debate it has been argued that it may not be appropriate to class PTSD as a disorder at all even in Western settings rather than as a normal distress response to traumatizing experiences. Diagnostic approaches are also particularly challenging for common mental disorders, as it can be difficult to distinguish between non-pathological distress and mental disorder [132]. These issues make results difficult to interpret and compare in terms of whether reported rates of mental disorder reflect actual prevalence rates (and therefore true differences in prevalence rates between populations), or whether they are

due to some form of measurement error (either relating to the classification of the disorder itself, or due to the measures used) [10].

Mental health outcome relevant to this thesis

This thesis, Chapter 6 in particular, is concerned with the psychological distress (i.e. symptoms of common mental disorder) that is so common in humanitarian settings. This thesis does not take a diagnostic approach, where prevalence rates of depression or anxiety are established based on the display of symptoms above some specified threshold. Rather is it concerned with the range of symptoms of common mental disorder that exist within emergency-affected populations (measured more generally along a continuum), and how these relate to current perceived unmet needs and past traumatic events.

This approach was taken in order to avoid some of the challenges that exist in measuring diagnostic prevalence rates of mental disorders within humanitarian settings discussed above, and also since symptoms of common mental disorder (or distress) are generally the most widely occurring mental health outcome in humanitarian settings. Furthermore, much of the variance in symptom severity remains unexplained for this mental health outcome (see Section 2.5.3 below), raising questions about what contributing factors may be at play.

2.5.2 Risk factors for poor mental health in humanitarian emergencies

Populations affected by humanitarian emergencies are often exposed to a wide range of stressors, for instance loss of home or loved ones, forced displacements to camps, the deprivation of basic needs, or severe human rights violations, such as torture, sexual violence, persecution, rape, detention, or forced recruitment to fight [10, 13, 112, 115, 116, 138]. For example, a large meta-analysis found that 21% of survey participants in 29 of 40 source countries had personally experienced torture [120]. Similarly, a study amongst Burmese refugees living in Bangkok identified an average of 30 traumatic events experienced by

participants, including interrogation, imprisonment, threats of deportation and torture, which had been experienced either before or during the uprising in Burma, whilst fleeing, or after arrival in Bangkok [115].

Numerous studies have suggested a large number of risk factors for the elevated levels of distress and mental disorder found in humanitarian emergencies. Risk factors for poor mental health in these settings may be wide-ranging, and may be social, psychological or biological in nature [1]. Similar to how mental health and psychosocial needs are contextualised within the influential IASC Guidelines [1] (see Section 2.3.3), risk factors in emergency-affected populations have been suggested to include:

- Personal and demographic factors, which were usually already present prior to the humanitarian emergency. Female gender has been identified particularly commonly as risk factor for poor mental health in humanitarian emergency settings, though findings are not always consistent [115, 118, 119, 125, 128, 133, 139-143]. A large meta-analysis that took into account methodological differences between studies, for instance, found that studies with a higher proportion of female refugees reported slightly (but statistically significant) poorer mental health outcomes [133]. Conversely, an even larger subsequent meta-analysis reported no association between gender and both depression and PTSD when various methodological factors in studies (such as sample size, sampling method, or type of measure employed) were adjusted for [120]. One possible reason for the divergent results may be the different inclusion criteria employed; whilst the former included any studies that compared a refugee group to a non-refugee group (including children), and included any type of mental health indices (including diagnostic, personality or well-being scales) [133], the latter included only studies that assessed adult populations, and only those that reported prevalence rates for PTSD or depression [120]. Furthermore, the latter study used superior meta-regression techniques within its analyses. These findings

point towards the possibility that the differential gender effects found across studies may not only be due to methodological factors, but that female gender as risk factor for poorer mental health outcome may also be context-dependent, for instance according to population group or type of mental health outcome.

Other personal and demographic factors that have been suggested as risk factors for mental health problems in humanitarian emergencies include older age in adults [133, 141, 144]; being of school-age [119, 142, 145]; a family or personal history of psychiatric illness [43, 116, 119, 139]; previous experience of traumatic events such as childhood abuse [139]; submissive and dissociative coping styles [43]; diminished resilience beliefs [125]; education level (both higher and lower) [125, 139, 141, 144, 146]; occupation (i.e. lower risk if in a salaried job) [141]; or marital status (i.e. being separated or widowed, and in some studies being single, compared to being married) [128, 147].

- Experiences that occurred during the emergency. These may include the duration, frequency, severity and type of the event [115, 118, 119, 148]; exposure to traumatic events [120, 128, 143, 146, 149]; experience of torture [120, 130, 150-153]; political imprisonment [153]; being witness to murder or physical abuse, receiving threats, property destruction or loss [154]; direct exposure to the disaster [125]; physical injuries acquired during the event [116]; forced displacement [128]; the feeling of danger towards oneself, proximity to traumatic events, or the violation of human rights [1, 43].

- The post-disaster environmental conditions within which the individual currently lives. It is these post-emergency factors that represent the current needs experienced by the emergency-affected population. Post-disaster environmental conditions have been found to have an impact on

poor mental health not only in low-income settings but also amongst refugees and asylum seekers living in high-income (often Western) countries [127, 155], especially for depression [36]. Research has shown them to include low socio-economic status [118, 119]; unemployment [147]; residency status [120]; living in a refugee camp [120]; time since conflict [120]; length of time spent in a camp [115]; duration of asylum procedure [127, 143, 155]; residential mobility [156]; marginalisation, discrimination or stigmatisation [43, 118, 119, 143]; low level of social support, deteriorating psychosocial resources, low social capital [35, 119, 139, 148]; food insecurity [157]; poor sanitation, health care, education or nutrition [10, 116]; financial difficulties or loss of livelihood [119, 140]; daily hassles, interpersonal strains [119]; or separation from or loss of family members [115, 116]). Factors such as cultural bereavement (grief due to the loss of their social structure and culture), changes to their cultural identity, and cultural congruity (i.e. ethnic density) can also have an impact on poor mental health amongst populations living away from their home country [158]. These factors may be linked to what is known as 'acculturative stress' or the 'acculturation process' that can be the result of migration to a host culture [159].

2.5.3 Approaches within humanitarian mental health research

Teasing out the main risk factors for poor mental health in humanitarian settings is challenging. Apart from methodological and diagnostic issues in measuring mental health outcome (see Section 2.5.1 for further details), the relationship between different risk factors is complex [44, 139], and vulnerability to poor mental health may depend on an interaction between individual, environmental, event-related, and cultural factors.

Historically, from amongst the risk factors discussed in Section 2.5.2, there has been a heavy emphasis placed within relevant research and mental health

interventions on the potentially traumatic events experienced during a humanitarian emergency, and the effects these may have on emergency-affected persons' mental health. PTSD has featured most prominently as the mental health outcome indicator of choice in evaluation studies [137, 141, 144]. Recent reviews and other studies have indeed confirmed that experience of torture, violence, conflict and other potentially traumatic events are strongly associated with mental disorders, such as PTSD or depression [42, 120, 141, 144, 157]. For instance, a recent large meta-analysis of over 80,000 conflict- and displacement-affected populations found that exposure to torture and other past traumatic experiences were associated with both PTSD and depression [120]. A study in Algeria, Cambodia, Ethiopia and Gaza also showed that having experienced torture, violence and conflict events after 12 years of age were significantly related to mental disorder in all four samples [42, 144]. Similarly, a study amongst Bosnian refugees found that war-related violence as well as post-war social isolation was strongly associated with PTSD symptoms, though this was not the case for depression [160]. Furthermore, an association has been reported between the witnessing of traumatic events and PTSD symptoms amongst Ugandan nationals, as well as Sudanese nationals and refugees [141]. A review of 160 studies comprising over 60,000 individuals also showed that mental disorders were higher amongst those who had experienced mass violence rather than natural disasters (although low-income countries were underrepresented and most disasters included in the review were natural rather than conflict-related) [119]. Some studies have reported a dose-response relationship between the degree of trauma exposed to and the prevalence of mental disorder, i.e. the more trauma has been experienced, the more pronounced the psychological problems [142].

However, in the last few years, there has been a shift to also consider the role of daily stressors in predicting mental health outcome in humanitarian settings. In line with the integrative 'mental health and psychosocial support' approach outlined in Section 2.3.3, a debate has arisen over the relative value of trauma-

focused perspectives in humanitarian emergency settings, i.e. the usefulness of approaches which focus on the impact that past traumatic exposure may have on mental health outcome, and which therefore concentrate primarily on trauma-based interventions to improve mental health. The application of this broader 'mental health and psychosocial' framework in humanitarian response has brought about the following question. To what extent do daily stressors or current needs experienced in the post-emergency environment (for instance poverty, forced displacement to camps, overcrowding, or malnutrition) account for the impact of traumatic exposure on mental health (e.g. [36, 94-96])? It is not clear how much of the variance in mental health outcome may be predicted by current needs or stressors in the potentially modifiable post-emergency recovery environment versus traumatic events that have already occurred previously, and what the nature of this interaction is.

Recently, various models have been proposed that attempt to explain the interaction between these variables. One such model, proposed by Miller and Rasmussen [36, 94], purports that daily stressors partially mediate the relationship between past traumatic experiences and mental health in conflict and post-conflict settings (see Figure 2.3), i.e. that daily stressors partly account for the impact of trauma exposure on mental health. They argue that, although the direct traumatizing effects of war exposure play a significant role in predicting affected populations' mental health, these are often overemphasized compared to the daily stressors that are present in post-conflict environments. Based on this model, they advocate an integrative intervention approach, which addresses daily stressors first, and specialized trauma interventions next only for those individuals who are still very distressed.

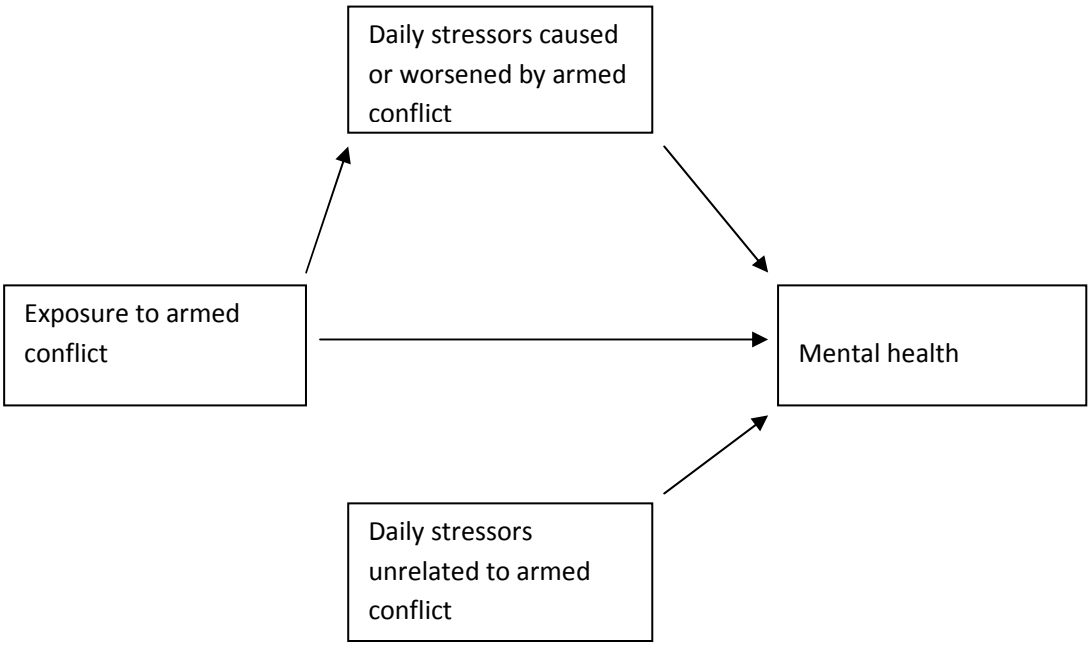


Figure 2.3 Miller and Rasmussen's (2010) mediation model
Taken from [36] in modified form; adapted from [161].

Miller and Rasmussen's model [36] was framed based on recent empirical research in a variety of conflict-affected settings, which highlighted the importance of daily stressors in predicting mental health outcome. For instance, previous research had found that war exposure could only account for a small percentage of the variance in mental disorders such as PTSD, and especially depression and distress [36]. Furthermore, in a study by Miller et al in the Afghani capital Kabul [162], war exposure was reported to only account for around 15% of the variance in PTSD symptoms. Another study amongst Darfuri refugees living in refugee camps in Chad showed that only between around 2% and 5% of the variance in psychological distress, and 1% of the variance in PTSD symptoms, could be explained by past traumatic events, whereas basic needs and perception of safety predicted between 4% and 9% of the variance in psychological distress, and between 4% and 5% of the variance in PTSD symptoms; daily stressors fully mediated the relationship between war exposure and PTSD [163]. A study amongst adolescents in Sri Lanka also found that only about 10%, 5% and 11% of PTSD, depression and anxiety symptoms respectively

could be explained by exposure to either conflict or the tsunami, and that daily stressors partially mediated the relationship between conflict/tsunami exposure and all three mental health outcomes [161].

Another conflicting model by Neuner [95] has suggested that poor mental health (which may be caused or exacerbated by past traumatic experiences) may conversely result in a change in the perception of daily stressors, or even the self-generation of daily stressors. This model differs from Miller and Rasmussen's mediator model [36] in that the perception of daily stressors are seen to be the result of poor mental health rather than the cause. According to Neuner [95], this model is supported by research in the mental health stress field, which has postulated that the presence of a mental disorder may increase the probability of experiencing stressful life events – the stress generation effect [164]. However, this model has not yet been tested in conflict- or disaster-affected populations [95].

Empirical research directly addressing either of these models has been scarce. Furthermore, there has been an emphasis on war-related trauma in conflict-affected populations [36, 94], and there have not been many studies assessing exposure to other potentially traumatic events in a wider range of humanitarian settings. Although one recent study found that secondary stressors such as the loss of property or death of a loved one were more closely associated with mood/anxiety disorders including depression, generalized anxiety disorder and PTSD than direct exposure to a natural disaster [165], the study did not assess the nature of this interaction.

If it could be shown that the current recovery environment (i.e. current needs) has a substantial impact on poor mental health, as has been proposed [36, 94], it follows that any positive changes to this environment may potentially improve mental health (just as negative changes may exacerbate poor mental health). Indeed, a recent international meta-analysis found that the post-displacement

situation can have a substantial effect on refugees' and IDP's mental health, and that an improvement in these conditions has positive impacts [133]. The distress (i.e. symptoms of common mental disorder) experienced by emergency-affected populations could therefore potentially be lessened (or worsened) by humanitarian action [166]. A study looking to elucidate the extent to which current unmet needs in the recovery environment impact on affected population's mental health compared to any traumatic events experienced, and what the nature of this interaction is – across a range of humanitarian settings – would therefore be useful (see Chapter 6 for such a study).

2.6 Conclusion

So far, within the humanitarian field, there has been a standardised psychometrically robust needs assessment scale lacking that is able to provide multi-sectoral population-level quantitative data on perceived needs within populations affected by humanitarian emergencies. Such a tool would be consistent with recent advances in the humanitarian field, both in terms of facilitating the increased participation of affected populations and enhancing accountability by humanitarian organizations within emergency response, as well as – by measuring a wide range of psychological and social problems – being in line with the wider 'mental health and psychosocial' framework that is increasingly being advocated within the humanitarian field. The use of psychometric techniques (i.e. the assessment of reliability and validity), which has so far not been applied to humanitarian needs assessments, would also be in keeping with recent calls for more standardised and consistent evidence-based approaches within humanitarian response. What is more, such a tool would be able to help address the important and currently prominent question of the extent to which mental health outcomes in humanitarian settings (such as frequently occurring symptoms of common mental disorder) are due to either the current unmet needs present in the recovery environment compared to the traumatic events experienced previously.

This thesis describes the development of such a scale – the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale (see Chapters 3 to 5), as well as its application in measuring perceived needs, and in providing data to predict mental health outcome within populations affected by humanitarian emergencies (see Chapter 6).

CHAPTER 3

Overview of HESPER Scale

3.1 Introduction

This chapter provides an introductory overview of the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale [167], the development and use of which is described in this thesis (see Chapters 4 and 5 for the development and testing of the scale, and Chapter 6 for its application as tool to measure perceived needs, and to provide data that is able to predict mental health outcome; also see [168] or Appendix F1 for a paper on the scale's development and psychometric properties).

The chapter includes the HESPER Scale's aims and criteria (Section 3.2); the reasons for developing the scale (Section 3.3); the model on which it is based (Section 3.4); an overview of the scale's final structure (Section 3.5); a description of how the development of the scale was managed (Section 3.6); and a summary of work on the HESPER Scale that was conducted prior to the author's PhD programme (Section 3.7).

3.2 Aims and criteria of HESPER Scale

The aim was for the HESPER Scale to be a standardised valid and reliable tool for the assessment of perceived serious needs of the general adult population in humanitarian settings in low- and middle-income countries. Perceived needs are defined here as needs which are felt or expressed by people themselves and are problem areas with which they would like help.

The following criteria were aspired to in the development of the HESPER Scale:

- To be valid and reliable (i.e. have strong psychometric properties)
- To be completed rapidly (between 15 and 30 minutes on average)

- To be easily self-learned and used on the basis of a self-training manual by local staff (without extensive use of trainers)
- To be culturally applicable to a wide range of populations and contexts in humanitarian emergencies in low- and middle-income countries, as this is where most large-scale disasters and conflict situations occur [2, 5, 55], although the scale could also potentially be applicable to disasters in high-income countries (such as during the large-scale displacement following hurricane Katrina [169, 170]). Relevant settings may include acute or chronic humanitarian situations, urban or rural settings, and camp or community contexts, whether those caused by natural disasters, or during war or other large-scale conflict.
- To be usable within different phases, including in the midst of a humanitarian crisis
- To assess the perceived needs of affected populations across multiple domains, including physical, social, and psychological needs
- To be administered to a representative sample of the general adult population in humanitarian settings, with the possibility of aggregating the data to population or sub-population level to identify overall perceived needs of the affected populations or of separate groups within the population
- In addition to having core items that assess almost universally occurring needs, to have the capacity for locally developed items to be added to the scale to account for needs that are specifically relevant to the local context
- To be consistent with policies by the World Health Organization (WHO) [55, 171-174] and the Inter-Agency Standing Committee's (IASC) *Guidelines on Mental Health and Psychosocial Support in Emergency Settings* [1]

Chapter 7 contains a discussion of how these criteria were met in the development of the HESPER Scale.

3.3 Reasons for developing the HESPER Scale

The HESPER Scale was developed to fill several gaps in the humanitarian field, which are outlined here in brief (see Section 2.3.5 for further details). First, it is consistent with repeated recommendations made in recent years for the increased participation of affected populations and for the use of perceived needs in humanitarian assessment [1, 8, 48-50, 56, 65, 76-78]. Unlike any other scale in the humanitarian field, and in line with moves towards a 'mental health and psychosocial' framework [1, 35-39], the HESPER Scale aims to provide population-based quantitative data on perceived needs across a broad range of sectors (including mental health and psychosocial needs). Second, the scale gives researchers a tool to answer a key question in the humanitarian field, i.e. the extent to which the distress or mental disorder within an affected population results from either events that have already occurred (i.e. previous trauma or loss), or those arising from the recovery environment (i.e. current unmet needs) [36, 120, 133] (see Chapter 6 for a study on this). Finally, the scale aims to produce psychometrically robust data on the perceived needs of affected populations, again unlike any other scale in the humanitarian field.

The HESPER Scale is therefore unique in that it aims to enable rapid population-based assessment of 'subjectively' perceived needs in representative samples of populations affected by large-scale humanitarian emergencies in a valid and reliable manner. The scale thereby combines the strengths of survey research (i.e. representative samples) with that of participatory methods (i.e. measuring perceived needs) (see Section 2.3.4 for further details).

3.4 The CANSAS as model

The HESPER Scale was modelled after a mental health instrument, the interviewer-administered, semi-structured Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) [175] (see Appendix E2). The CANSAS measures the perceived needs of people with mental disorders across 22

domains, in terms of met need (rated as '1': a need exists but there are no or moderate problems due to help given), unmet need (rated as '2': a need exists and there are serious problems, whether or not help is given), no need (rated as '0'), or unknown/not applicable (rated as '9'). Three summary scores can then be calculated either in terms of total number of needs ('1' or '2' ratings), total number of met needs ('1' ratings), or total number of unmet needs ('2' ratings), with all domains carrying equal weights.

The CANSAS is a shortened version of the Camberwell Assessment of Need (CAN) [175], which has well-established reliability and validity [25, 176], and is now the most widely used needs assessment instrument for people with mental health problems. It has been modified successfully for use in adults with learning disabilities (CANDID) [19, 177], the elderly (CANE) [26, 178], mothers (CAN-M) [179, 180], and forensic populations (CANFOR) [181, 182]. A patient-rated version of the CANSAS has also been developed (CANSAS-P) [183]. The CAN has been translated into at least 25 languages, in several of which it has been psychometrically validated [184-186], and has been successfully adapted for use in several European countries (CAN-EU) [187, 188]. Both the CAN and CANSAS have been used on a wide range of populations, including asylum seekers and refugees in the United Kingdom (UK) [189, 190] and the Netherlands [191], as well as torture victims in centres of the International Rehabilitation Council for Torture Victims (IRCT) [192] across several countries [193].

The CANSAS was chosen as model, since – in accordance with the HESPER Scale – it is based on the view of need as a subjectively perceived concept [18], which directly relates to a person's quality of life and mental health [23]. Furthermore, it is based on the recognition that, although there are basic universal human needs, certain populations may also have additional unique needs [25], making it suitable for adaptation in diverse populations. Furthermore, the CANSAS is administered rapidly, and was developed within patient groups in the field

without extensive training, consistent with the criteria applied in the development of the HESPER Scale.

Since the populations to which the HESPER Scale is applicable vary greatly from the population for which the CANSAS was developed – i.e. whilst the CANSAS was primarily developed for people with mental health problems in high-income countries, the HESPER Scale was developed for the general adult population in humanitarian settings in low- and middle-income countries – the CANSAS was not ideal for use in emergency-affected populations. Whilst the format of the CANSAS was suitable, the content (i.e. the individual need items) was less applicable (though some of the basic items overlap). The HESPER Scale therefore retained a similar, though adapted, format and structure to the CANSAS, but its content was modified to suit humanitarian settings.

3.5 Overview of HESPER Scale's final structure

The final version of the HESPER Scale is displayed in the HESPER manual, on pages 38 to 39 of Appendix F3 (also see [167]). Perceived needs are assessed on the HESPER Scale across 26 need items, which each include a short item heading, as well as an accompanying question. Examples of need items include 'Place to live in' ("Do you have a serious problem because you do not have an adequate place to live in?"), 'Education for your children' ("Do you have a serious problem because your children are not in school or are not getting a good enough education?"), and 'Mental illness in your community' ('Is there a serious problem in your community because people have a mental illness?'). Ratings are then made for each need item according to unmet need (or serious problem; '1' rating), no need (or no serious problem; '0' rating), or no answer (i.e. refused, not known, or not applicable; '9' rating). Among items that have been rated as unmet need, participants are asked to rank their three most serious problems (hereafter referred to as priority ratings). Participants are also asked to name any

additional unmet needs not already listed. A total score of unmet needs can be calculated by adding up the number of items rated as serious problems.

3.6 Management of HESPER project

The development of the HESPER Scale was a collaborative project between the Department of Mental Health and Substance Abuse at WHO Geneva, and the Institute of Psychiatry (IoP) at King's College London (KCL). Dr Mark van Ommeren at WHO and Prof Graham Thornicroft at KCL jointly conceptualized the development of the HESPER Scale.

The author of this thesis developed the science of the HESPER Scale, conducted all seven pilot- and field-studies (see Chapters 4 to 6 for further details), obtained ethical approval at KCL for all stages of the project, carried out all data analyses (apart from the mediator analyses presented in Chapter 6**;** see Chapter 6 for further details), and drafted all project materials, including the different versions of the HESPER Scale (see Appendices A1, A2 and A3), its accompanying interviewers' training manual (see pages 41 to 69 in Appendix F3; also see Section 4.2 for further details), as well as an extensive HESPER manual for project leaders and supervisors that was published following the scale's finalization (see Appendix F3; also see Section 5.5 for further details). This was all conducted by the author in close consultation with the main collaborator at WHO, Dr Mark van Ommeren (see Acknowledgements section for the contribution of other members of the HESPER project group).

The development of the HESPER Scale was guided by a steering committee of international experts at KCL and WHO. Phone conferences were attended by this group every three to four months (chaired by the author), to discuss and make decisions on the progress of the project. Furthermore, an international advisory group of humanitarian and other relevant experts offered their advice on

particular issues throughout the project, including the peer-review of project materials (see Acknowledgements section for member lists).

At the start of the HESPER project, a project framework was developed by the author with input from members of the steering committee and international advisory group. This was used as a guide throughout the project, and contained the aims of the project, reasons for developing the HESPER Scale, and an overview of the scale development process (including schedule).

3.7 Previous work on HESPER project

The development of the HESPER Scale commenced in 2008 with the development of a first draft of the scale. This work was conducted as part of an MSc in Mental Health Service and Population Research that the author completed at the IoP. It covered 'Phase 1' of the HESPER project, as highlighted in the box below.

- ***Phase 1 (2008):*** **Development of a first draft scale through a process of item generation and item reduction, based on first a literature review, and second a survey with humanitarian experts (Section 3.7 and Appendix E1).**
- *Phase 2 (2009):* Preparation of the draft scale for pilot-testing (Section 4.2). Pre-testing of the draft scale in the UK with refugees from the Democratic Republic of the Congo (DRC) (Section 4.3), and subsequent pilot-testing in Jordan with displaced Iraqi people, and with the local populations in Gaza and Sudan (Section 4.4), to assess the scale's feasibility, intelligibility, comprehensiveness and cultural applicability, to determine the suitability of training materials, and to establish face and content validity. Expert survey on the ideal length of the scale (Section 4.4).
- *Phase 3 (2010):* Field-testing of the revised draft scale in Jordan with displaced Iraqi people, in Haiti with people living in post-earthquake displacement camps, and in Nepal with Bhutanese refugees, to assess its psychometric properties (i.e. inter-rater and test-retest reliability, internal consistency, and criterion (concurrent) validity) (Chapter 5). Study to measure the level of perceived needs in these settings, and to assess the relationship between symptoms of common mental disorder, perceived unmet needs, and past traumatic events (Chapter 6).

The work undertaken during this stage of the project is included here in brief to aid understanding of subsequent parts of the project. A shortened version of the author's MSc dissertation [194], which contains more detail on this part of the project, is included in Appendix E1.

The first draft of the HESPER Scale was developed through a process of item generation and item reduction. An item pool of 38 items was generated by extracting items from grey and peer-reviewed literature which directly documented emergency-affected people's views of perceived needs, such as previous humanitarian needs assessments, existing assessment reports of non-governmental organisations (NGOs), and published journal articles on perceived needs (14 sources) [8, 64, 195-206]. Only items that were mentioned at least twice in any of these sources were included.

Need items were then selected and reduced into the draft scale based on a survey with a wide range of purposively sampled general and psychosocial humanitarian experts across the world (24 male and 19 female), as well as six national aid workers in Sierra Leone. The survey included both quantitative and qualitative responses; participants rated the need items which had been compiled during the item generation stage on an 11-point scale (0 to 10) of importance for inclusion into the scale, and suggested additional perceived need items that they considered important for inclusion. In addition, participants were encouraged to provide any further comments or feedback.

All 38 draft items were rated as at least moderately important by the 49 expert survey participants, with means of between 4.88 (SD=3.27) and 9.39 (SD=1.15) on a scale of 0 to 10. Furthermore, the proposed scale was felt to be useful and called for by the expert participants, and they considered the suggested list of items to be appropriate and comprehensive, which provided preliminary support for face validity and content validity of the draft scale (see Section 2.4 for a description of these concepts) [103].

A broad approach was therefore taken in the selection of items into the first draft HESPER Scale. The draft scale was reduced from 38 to 32 items based on the expert survey, primarily by rephrasing and regrouping items. One item ('Health care') was added based on participants' suggestions. A further item ('Political freedom') was excluded, since it was felt by the project's steering committee that its inclusion may potentially deter affected populations from participating in the needs assessment, or may even put them at risk in repressive cultures. Furthermore, a section was introduced whereby those needs which have been rated as unmet are ranked in order of importance, where numerous needs are unmet (i.e. a section where participants list their three most serious problems; referred to as priority ratings). This may facilitate the prioritisation of needs and emergency relief to those areas where it is perceived to be needed most. The section may be particularly useful in settings where the level of need is very high overall, which could result in a large number of HESPER items being rated as unmet need by participants.

The author's PhD commenced with the first draft of the HESPER Scale that had been developed during her MSc (see Appendix A1 for first draft scale). The remainder of this thesis describes the work conducted during her PhD programme, including the further development of the HESPER Scale ready for testing in the field (see Section 4.2), pilot-testing of the scale in small samples in relevant populations (see Sections 4.3 and 4.4), field-testing of the scale in larger samples in populations affected by humanitarian emergencies (see Chapter 5), as well as a study to assess use of the HESPER Scale as measure of perceived needs, and its ability to provide data that can predict mental health outcome (see Chapter 6).

CHAPTER 4

Development and Pilot-Testing of HESPER Scale

4.1 Introduction

This chapter describes the development of the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale conducted during the author's PhD programme. This entailed first the development of the HESPER Scale ready for pilot-testing in relevant population groups (Section 4.2), subsequent pre-testing of the draft scale in the United Kingdom (UK) with a small sample of refugees from the Democratic Republic of the Congo (DRC) (Section 4.3), and then pilot-testing of the draft scale in three diverse populations affected by humanitarian emergencies in low- and middle-income countries (Jordan, Gaza and Sudan) (Section 4.4).

The draft HESPER Scale was developed and pilot-tested through contributions by several diverse populations who had experience of the settings for which the scale was being developed, in line with the HESPER project's aims of involving a wide range of stakeholders in the scale development process, and taking into account the views of emergency-affected populations [1, 8, 48-50, 56, 65, 76-78]. This ensured that the scale was assessed in populations representative of those for whom it was being developed [49, 62, 207], and facilitated their participation in the development of the scale. It was also in line with previous publications on the procedures fundamental to scale development [103] (see Section 2.4 for further details).

Some of the details included in this chapter on the development and pilot-testing of the HESPER Scale were published in brief as part of a research paper on which the author of this thesis had first authorship [168] (also see Appendix F1).

4.2 Development of HESPER Scale for pilot-testing

4.2.1 Introduction

This section describes the development of the draft HESPER Scale in preparation for pilot-testing amongst populations affected by humanitarian emergencies. This followed on from the development of the first draft scale during the author's MSc in Mental Health Service and Population Research at the Institute of Psychiatry (IoP) (see Section 3.7 and Appendix E1).

This section covers part of 'Phase 2' of the HESPER project, as highlighted in the box below.

- *Phase 1 (2008):* Development of a first draft scale through a process of item generation and item reduction, based on first a literature review, and second a survey with humanitarian experts (Section 3.7 and Appendix E1).
- ***Phase 2 (2009):* Preparation of the draft scale for pilot-testing (Section 4.2).** Pre-testing of the draft scale in the UK with refugees from the Democratic Republic of the Congo (DRC) (Section 4.3), and subsequent pilot-testing in Jordan with displaced Iraqi people, and with the local populations in Gaza and Sudan (Section 4.4), to assess the scale's feasibility, intelligibility, comprehensiveness and cultural applicability, to determine the suitability of training materials, and to establish face and content validity. Expert survey on the ideal length of the scale (Section 4.4).
- *Phase 3 (2010):* Field-testing of the revised draft scale in Jordan with displaced Iraqi people, in Haiti with people living in post-earthquake displacement camps, and in Nepal with Bhutanese refugees, to assess its psychometric properties (i.e. inter-rater and test-retest reliability, internal consistency, and criterion (concurrent) validity) (Chapter 5). Study to measure the level of perceived needs in these settings, and to assess the relationship between symptoms of common mental disorder, perceived unmet needs, and past traumatic events (Chapter 6).

4.2.2 Methods

Design

Whilst the development of the first draft of the HESPER Scale (see Section 3.7 and Appendix E1) involved the generation and reduction of items, subsequent preparations entailed the further development and refinement of the draft scale that went beyond selecting items into the scale. This stage was necessary to ensure that the scale was ready for use in the field for pilot-testing in relevant populations. An interviewers' training manual was also developed to accompany the HESPER Scale.

These developments were aided by comments from participants during a humanitarian 'Training of Trainers (ToT)' [208] course which the author attended in Uganda; by feedback from clinicians who had previously used the Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) [175] with torture victims across several countries; a background literature search of relevant training manuals; and a peer-review by members of the HESPER project's steering committee and international advisory group.

Since this part of the HESPER project did not involve a typical research study, but rather a developmental process to prepare the draft HESPER Scale for pilot-testing in the field, it is not appropriate to refer to any traditional study design here, as is usually required within scientific reports.

Samples

Participants of an international course on 'Training of Trainers (ToT) for psychosocial and mental health initiatives in countries affected by war, violence and natural disasters' [208] run by the 'Transcultural Psychosocial Organization' (TPO) [209] which the author attended in Uganda provided feedback on the draft HESPER Scale. This participant group was relevant, as it consisted of humanitarian agency workers and other relevant professionals from several countries (including Uganda, Burundi, Swaziland, South Africa, Democratic

Republic of the Congo (DRC), Zimbabwe, Sri Lanka, UK, Belgium, Sweden, USA and Australia), so was a group that was representative of those who would be administering the HESPER Scale as interviewers post-development.

Clinicians attending a regional training seminar for the Middle East and North Africa region by the International Rehabilitation Council for Torture Victims (IRCT) [192], as well as one clinician working in Honduras, provided feedback on their experiences of using the CANSAS [175], the tool on which the HESPER Scale was modelled (see Section 3.4 for further details). This group was useful to the developmental process of the HESPER Scale, as they had used the CANSAS with torture victims across several countries, i.e. a different population for which the CANSAS was developed, yet one which was similar to the population for which the HESPER Scale was being developed.

Members of the HESPER project's steering committee and international advisory group carried out a peer-review of relevant project materials. These included members of staff at King's College London (KCL), the World Health Organization (WHO), and several other Universities and humanitarian organizations (see Acknowledgements section for a list of members and their affiliations). This group was highly suitable as participants due to their expertise working either in humanitarian settings, amongst other relevant populations, or within scale development.

Settings

The 'ToT' course [208] took place in the Royal Impala Hotel in Munyonyo, Kampala and in the TPO complex in Arua in the North-West of Uganda. The regional training seminar for clinicians was conducted in the offices of the IRCT [192] in Istanbul. The peer-review by members of the steering committee and international advisory group was conducted via email.

Procedure

Following the generation and selection of items into the draft scale (see Section 3.7 and Appendix E1), a more complete version of the HESPER Scale ready for pilot-testing was developed by the author in cooperation with the main collaborator at WHO. This stage entailed the structuring of the order of items, the rephrasing of item headings, the formulation of questions to accompany each of the scale's item headings, the introduction of demographic information to the scale, the development of the rating system, and the introduction of a section on additional unmet needs (see Section 4.2.3 below for further details).

As part of this developmental process, feedback on the draft scale was collected by the author from course participants of a 'ToT' course in Uganda in January 2009. Role-plays were also conducted with course participants to test the draft scale, whereby one person would pose as the interviewer, and another would act as the respondent. This feedback was especially useful in highlighting issues related to the practical application and intelligibility of the HESPER Scale.

Additionally, feedback was obtained by a member of the international advisory group from a group of 22 clinicians on their experiences of using the CANSAS [175] with torture victims in January 2009 during an IRCT regional training seminar workshop in Istanbul. A clinician in Honduras provided further feedback. Participants were asked to describe any difficulties they had experienced in the use of the CANSAS, to comment on the format of the CANSAS, to suggest missing as well as superfluous items for the particular respondent group, and to propose any further changes. Their comments from the group discussion were noted down, and translated back into English where comments had been made in either Arabic or French. A summary document (in English) was sent to the group following the seminar, and they agreed that this was an accurate summation of their comments. This feedback fed into the further development of the HESPER Scale, in particular issues relating to its practical application, structural format, and cultural applicability.

Moreover, consistent with recommendations on the production of training manuals [61], an interviewers' training manual was developed to accompany the HESPER Scale as training material for interviewers. One of the aims of this was to enable administration of the scale by humanitarian staff members without extensive training (see the HESPER Scale's criteria in Section 3.2). The manual was therefore designed to be adequate as training material for interviewers, and to contain sufficient information for interviewers to be able to carry out a HESPER interview after studying the manual. Since inter-rater reliability of a scale can be improved by training interviewers well, a further reason for developing the manual was to strengthen reliability of the HESPER Scale.

To gather ideas for the manual, the author explored other relevant manuals and handbooks before drafting the interviewers' training manual (with substantial input from the main collaborator at WHO), such as ones by the United Nations (UN) and WHO [30, 210-213], the Humanitarian Aid and Civil Protection department of the European Commission (ECHO) [214], the United States Agency for International Development (USAID) [215], the Asian Disaster Preparedness Center (ADPC) [216], the various Camberwell Assessment of Need (CAN) manuals [175, 177, 178, 180, 181], as well as several other guides [217-219].

The draft interviewers' training manual consisted of sections with an overview of the HESPER Scale (including an introduction to the HESPER Scale, an explanation of who is suitable as interviewer, and the scale's rating system), a description of the HESPER assessment process (including an example interview script, and explanations for individual HESPER items), further considerations relevant to interviews (such as the safety of interviewers and participants, the importance of confidentiality, how to handle distress and hearing about horrific events, and the self-care and supervision of interviewers), as well as a section with practice questions, practice interviews and role plays, and finally the research team's contact details.

Peer-review is essential within scientific research, to ensure its rigour and accuracy, and is used consistently within scientific publications [220]. Six members of the HESPER project's steering committee and 14 members of the international advisory group were therefore sent an email in March 2009, asking them to review all project materials. Out of these, 11 (55.0%) members (eight male, three female) did so. Seven members did not reply to the invitation for peer-review (one of whom had already collected data from clinicians via IRCT), and two members of the group named time constraints as their reason for non-response. Participants of the peer-review were initially given 16 days to reply, though an extension was granted to several participants. The draft HESPER Scale and interviewers' training manual were finalised ready for pilot-testing in relevant populations based on this peer-review.

4.2.3 Revisions to draft HESPER Scale

The following revisions were made to the first draft of the HESPER Scale (see Appendix A1 for the first draft HESPER Scale) in preparation for pilot-testing of the scale (see Appendix A2 for the draft version of the HESPER Scale used during pilot-testing). First, whereas the 32 need items had been listed alphabetically in the first draft scale (as this draft had merely involved the generation and selection of items into the scale), items were now structured so that basic needs appeared at the beginning, sensitive items in the middle, and non-survival needs appeared towards the end of the scale (see Table 4.1 on page 79), in accordance with what is considered appropriate within instrument design [63], and as was suggested by one participant during the previous item selection survey with humanitarian experts conducted during the author's MSc (see Appendix E1 for further details). Sensitive items were also asked on the community-, rather than the individual-, level, so as to encourage truthful responses due to their potentially embarrassing or upsetting nature, or for items where an honest

response was likely to instil fear in participants in certain settings due to safety risks.

Second, the item headings that had been used in the first draft scale were simplified and reworded to ease their intelligibility for participants. During the previous survey with humanitarian experts concept nouns had been used as item headings (see Appendix E1 for further details), without detailed attention having been given to the exact wording of items. Item headings were therefore now rephrased where it simplified or clarified items for participants (see Table 4.1) [221]. Need items were expressed in terms of problems rather than as solutions or service response, consistent with the CANSAS [175] and with humanitarian methods [49, 50]. Problems are thereby simply identified rather than a solution to the problem being imposed, which helps in distinguishing problems from the formulation of solutions more clearly [50].

Third, sample questions were introduced for each item (see Appendix A2). The aim was for these to further clarify the meaning of items, for example by incorporating any sub-items into the question where relevant, and also to ease use of the HESPER Scale for interviewers. Publications from 'The Plain English Campaign' (for example one on '*How to write in plain English*', see [221]) were drawn on, to ensure that the questions, as well as the item headings, were phrased in simple language. Flesch and Flesch-Kincaid readability levels [222, 223], which give an indication of the reading skills necessary to understand a particular text, were also kept at a low level (i.e. below grade level 7).

Fourth, space for participants' demographic information was added to the top of the draft HESPER Scale (see Appendix A2). These included participants' gender, age, years of formal education, marital status, number of children, religion (where relevant/appropriate to ask), ethnicity (where relevant/appropriate to ask), and length of time of displacement (where relevant). Space was also included to add the interview date, participant number, and interviewer name.

The collecting of demographic data is vital within epidemiological research, in order to be able to derive accurate population estimates [49], and to make statistical comparisons between different sub-groups in the population. The use of participant numbers, instead of participants' names, is important to ensure that data is collected and analysed anonymously and confidentially [224].

Fifth, the HESPER Scale's rating system was developed (see Appendix A2). Whilst the CANSAS [175] includes ratings for both 'no need' and 'met need' (as well as ratings for 'unmet need' and 'not known'), these two ratings were conflated into a single rating of 'no need' in the HESPER Scale (in addition to the ratings of 'unmet need' and 'not known/not applicable/answer declined', as is the case in the CANSAS). This simpler rating system was chosen to ease use of the scale in the field for interviewers, following previous reports that interviewers may have difficulties in distinguishing between 'met need' and 'no need' [183, 225]. Furthermore, empirical evidence about moderators [226, 227] and mediators [23, 228] of need indicate that unmet need is most predictive; a distinction between 'met need' and 'no need' is therefore of limited value. As is the case in the CANSAS [175], and advised by the literature [103], a simple total score of unmet needs was also introduced to the HESPER Scale by which the number of items rated as serious problems are added up.

Finally, in line with feedback from a few humanitarian expert participants during the previous item selection survey (see Appendix E1), a section was introduced to record any additional unmet needs not already included on the HESPER Scale (up to a maximum of three additional unmet needs, where relevant). This section was important to ensure the HESPER Scale's comprehensiveness and to reduce any biases due to the closed response format of the scale [18], in terms of being able to identify all needs that participants may have, and enabling them to express their needs more freely.

Table 4.1 Changes made to item headings following the revision of the draft HESPER Scale and its peer-review in preparation for pilot-testing

Previous item headings (first draft scale)	Revised item headings (pilot-testing)
	Basic needs
1. Water	1. Drinking water
2. Food/nutrition	2. Food
3. Cooking items/facilities	3. Cooking
4. Shelter/housing	4. Place to live in
5. Toilets	5. Toilets
6. Personal hygiene	6. Keeping clean
7. Clothing/bedding	7. Clothing and bedding[1]
8. Physical health	8. Physical health
9. Health care	9. Health care
10. Income/livelihood	10. Making a living[1]
11. Security/safety	11. Safety
12. Education for children	12. Education for your children
13. Child protection	13. Safety and protection for your children
	Sensitive issues (on the community level)
14. Violence against women	14. Safety and protection from violence for women in your community
15. Law and justice	15. Protection by the law for people in your community[1]
16. Burials/funerals/disposal of human remains	16. Burying and mourning the dead in your community
17. Alcohol	17. Alcohol use in your community
18. Drugs	18. Drug use in your community
19. Mental illness	19. Mental illness in your community
20. Care of unaccompanied persons in the community	20. Care for people in your community who are on their own
	Non-survival needs
21. Care of family members	21. Care for family members in your household[1]
22. Separation from family members	22. Separation from family members[1]
23. Social support	23. Support from others
24. Religious/cultural/spiritual practices	24. Religious, cultural or spiritual practices
25. Emotional distress	25. Distress
26. Displacement/uprooting	26. Living away from home
27. Disrespect/humiliation	27. Respect
28. Participation/decision-making	28. Having a say in the aid response[1]
29. Information	29. Information about the crisis situation[2]
30. Fair distribution of aid	30. Aid being handed out fairly[1]
31. Freedom of movement and transport	31. Moving around between places
32. Daytime activities	32. Having enough to do during the day[1]

Please see next page for foot notes to Table 4.1.

Foot notes for Table 4.1

Revised item headings are those included in the draft HESPER Scale for pilot-testing.
Items are listed in the order in which they appeared in the draft scale for pilot-testing (previously they had been listed alphabetically).

[1] Item headings are listed as phrased during pilot-testing in Jordan (the first pilot-site). Revisions were made to a few items following this. Item headings were phrased as follows in Gaza (item numbers stated in brackets): 'Clothing, shoes and bedding' (7), 'Livelihood' (10), 'Law and justice in your community' (15), 'Participation in the aid response' (28), 'Getting help from aid agencies' (30), and 'Too much free time' (32). In Sudan, items were phrased as follows: 'Clothing, shoes and bedding' (7), 'Income and livelihood' (10), 'Law and justice in your community' (15), 'Care for family members' (21), 'Separation from family members and friends' (22), 'Being involved in the aid process' (28), 'Getting help from aid agencies' (30), and 'Too much free time' (32) (see Section 4.4 for further details).

[2] This item is listed as phrased during pilot-testing in Gaza and Sudan. In Jordan, the item was divided into three parts: 'Information about the situation in Iraq', Information about aid', and 'Information about your legal rights' (see Section 4.4 for further details).

4.2.4 Conclusion

This stage involved the further development of the draft HESPER Scale and its accompanying interviewers' training manual in preparation for pilot-testing of the scale amongst relevant populations. This process benefited from comments by participants during a humanitarian 'Training of Trainers (ToT)' [208] course in Uganda; feedback from clinicians who had previously used the CANSAS [175] with torture victims across several countries; a background literature search of relevant training manuals; and a peer-review by members of the HESPER project's steering committee and international advisory group.

For the draft HESPER Scale, revisions entailed the structuring of the order of items, the rephrasing of item headings, the formulation of questions to accompany each of the scale's item headings, the introduction of demographic information to the scale, the development of the rating system, and the introduction of a section on additional unmet needs. An interviewers' training manual was developed to accompany the HESPER Scale, to enable administration of the scale by humanitarian staff members without extensive training, and to strengthen inter-rater reliability of the scale.

The next developmental phase of the HESPER Scale involved pilot-testing of the draft scale amongst relevant population groups, first in the UK with a refugee population from the Democratic Republic of the Congo (DRC) (see Section 4.3), and then in three diverse populations affected by humanitarian emergencies living in low- and middle-income countries (in Jordan with displaced Iraqi people, and the local populations in Gaza and Sudan) (see Section 4.4). Subsequently, the draft scale was field-tested in three further populations affected by humanitarian emergencies (displaced Iraqi people in Jordan, earthquake-affected people in Haiti, and Bhutanese refugees in Nepal) to assess its psychometric properties (see Chapter 5).

4.3 Pre-testing of HESPER Scale in the United Kingdom

4.3.1 Introduction

This section describes pre-testing of the draft HESPER Scale in the United Kingdom (UK) with refugees from the Democratic Republic of the Congo (DRC). This followed on from the preparation of the scale ready for pilot-testing amongst relevant population groups in humanitarian settings, as was outlined in Section 4.2. The reason for pre-testing of the scale in the UK was to check project materials and interviewing techniques, and to pre-assess the scale's feasibility, intelligibility and cultural applicability in a relevant population group, before pilot-testing commenced abroad.

This section describes part of 'Phase 2' of the HESPER project, as highlighted in the box below.

- *Phase 1 (2008):* Development of a first draft scale through a process of item generation and item reduction, based on first a literature review, and second a survey with humanitarian experts (Section 3.7 and Appendix E1).
- ***Phase 2 (2009):*** Preparation of the draft scale for pilot-testing (Section 4.2). **Pre-testing of the draft scale in the UK with refugees from the Democratic Republic of the Congo (DRC) (Section 4.3),** and subsequent pilot-testing in Jordan with displaced Iraqi people, and with the local populations in Gaza and Sudan (Section 4.4), to assess the scale's feasibility, intelligibility, comprehensiveness and cultural applicability, to determine the suitability of training materials, and to establish face and content validity. Expert survey on the ideal length of the scale (Section 4.4).
- *Phase 3 (2010):* Field-testing of the revised draft scale in Jordan with displaced Iraqi people, in Haiti with people living in post-earthquake displacement camps, and in Nepal with Bhutanese refugees, to assess its psychometric properties (i.e. inter-rater and test-retest reliability, internal consistency, and criterion (concurrent) validity) (Chapter 5). Study to measure the level of perceived needs in these settings, and to assess the relationship between symptoms of common mental disorder, perceived unmet needs, and past traumatic events (Chapter 6).

4.3.2 Methods

Design

A cross-sectional design was employed. Participants met with the interviewer (i.e. the author) individually on one occasion, in which:

- The draft HESPER Scale (see Appendix A2) was administered, with participants rating what their needs were whilst previously living in a refugee camp in Zambia. Although the HESPER Scale was designed to assess affected population's current needs, in order to test the HESPER Scale's feasibility and applicability more accurately, participants were asked to report on their previous needs in a context that was similar to the ones in which the HESPER Scale was likely to be used.
- A specially-designed participant survey (see Appendix B3) was administered to assess the draft HESPER Scale's intelligibility, adequacy and applicability. Participants ranked individual need items on an 11-point scale of importance (0 to 10), as well as suggesting additional missing need items, and commenting on the intelligibility of the scale.

Sample

A small sample of seven adult refugees from DRC, living in Kingston-upon-Hull (UK), were interviewed, who had all lived in the Mwange refugee camp in Zambia before coming to the UK. Each of them had entered the UK through the Home Office's Gateway Protection Programme, which legally resettles up to 750 refugees to the UK each year [229-231], and had been resettled to Hull in 2006/2007 through the British Refugee Council [232]. Participants were included into the study if they were over 18 years of age (as the HESPER Scale was being developed for adults only), and had sufficient English abilities. There were no further inclusion/exclusion criteria.

This sample was relevant as participant group due to them having lived in a refugee camp following their flight from DRC, a country which has been subject

to a violent and recurring civil war between governmental forces and tribal rebel groups [233, 234]. Since 1997, over five million people have died as a result, primarily due to starvation and disease, though there have also been killings of, and violent attacks towards, civilians [234].

Participants were recruited into the study through the British Refugee Council's Gateway Protection Programme [229, 231, 232]. Convenience sampling techniques were employed to recruit participants. Random probability sampling, which is generally preferable to convenience sampling [65] (see Section 2.3.4 for definitions), was not appropriate due to the small sample size and as the study involved the pre-testing of project materials rather than measuring some effect size. A sample size calculation was also not appropriate for the same reasons. Convenience samples have the advantage of providing a rapid and cheap way of reaching a target group [235-237] (see 'Procedure' section below for further details on the recruitment of participants).

Setting

Although participants were offered a hired room for interviews at the University of Hull [238], all participants chose for the interview to be conducted in their own homes.

Procedure

Ethics approval for the study was obtained from the Psychiatry, Nursing and Midwifery Research Ethics Office at King's College London (KCL) (PNM/08/09-19) (see Appendix B5 for ethics clearance letters). A participant information sheet and consent form (see Appendices B1 and B2) were developed and approved as part of the ethics process.

Contact was made with the British Refugee Council by the author through one of its employees known to two members of the HESPER project's steering committee. Staff at the Refugee Council then contacted suitable refugees by

telephone, asking them for their consent to be contacted by the author. Details of 11 households were received from the Refugee Council by the author. The author phoned these households about one week before interviews commenced, and answered any questions participants had about the study. An interview date and time was agreed with those participants who decided to take part; they were then sent the participant information sheet in the post, together with a reminder of the interview date and time (see Appendix B4 for this letter). They were also phoned again one or two days before the interview date, to ensure that participants were still available at the allotted time, and to answer any further questions they had about the study.

Interviews were conducted in English between 14th and 16th May 2009 by the author. As this stage of the project involved small-scale pre-testing of the draft HESPER Scale to test project materials before pilot-testing commenced abroad (where local interviewers were employed), it was not considered necessary to employ interviewers of the same cultural background as participants.

At the beginning of the interview, the participant information sheet was either read by participants or read out to them by the author, depending on participants' preferences. The study process was also reiterated verbally by the author, as well as it being stressed that participation was voluntary and that participants could choose not to respond to items; any further questions by participants were also answered. Participants were assigned a participant number, which was used on all project materials instead of their names. The sheet linking participant numbers with names was kept separately at all times, to ensure participants' anonymity and confidentiality.

Participants then either signed an informed consent form, or gave their verbal informed consent (with the researcher signing as witness that the participant had verbally agreed to take part), depending on their preference. This flexible approach was chosen because the requirement of written informed consent may

not be appropriate amongst all refugee populations, for instance in such settings where affected people may be less willing to sign forms for fear of being persecuted (i.e. they may distrust written forms); where having a signed form indicating their participation in a research study may potentially be dangerous or risky for participants; where the signing of forms may not fit in with their cultural norms; or where participants may be illiterate. The taking of verbal rather than written consent is indeed common in humanitarian settings (e.g. see [152]). In this study, only one participant chose to give their verbal, rather than their written, consent. Participants were given a copy of the signed informed consent form and participant information sheet to keep; another copy of the informed consent form was retained by the author.

Following the informed consent process, participants were administered the draft HESPER Scale (see Appendix A2) by the author. In line with how the HESPER Scale was intended to be administered in humanitarian settings post-development, participants were read out each of the scale's 32 items by the author, who then recorded – based on participants' responses – whether each of these items had been a serious problem for them whilst living in Mwange refugee camp in Zambia. Participants also listed any additional unmet needs, and ranked their three most serious problems whilst living in the refugee camp.

Participants subsequently either completed or were administered a specially-designed participant survey (see Appendix B3), depending on their preference. In 'Part A' of the survey, participants rated a number of statements about the intelligibility, comprehensiveness, usefulness, and length of the HESPER Scale. As is common within attitude surveys [239, 240], ratings were made on a bipolar Likert scale [241] of 'strongly agree' ('1' rating), 'agree' ('2' rating), 'neither agree nor disagree' ('3' rating), 'disagree' ('4' rating), or 'strongly disagree' ('5' rating). In order to reduce acquiescence bias [242], the direction in which questions were phrased was alternated between items so that the answers 'strongly agree' and 'agree' elicited either a positive or negative response. 'Parts B', 'C' and 'D' of the

survey consisted of three open-ended questions about the intelligibility and comprehensiveness of the HESPER Scale, as well as whether participants found any items upsetting to talk about, and their overall experience of the interview.

At the end of the interview, participants were given the opportunity to ask any further questions or to comment on the study, and were advised that they were welcome to contact the author in the future if they had any more questions. Participants were thanked for their participation immediately after the interview, and were also sent a 'Thank you' card by post in the week following interviews.

Analyses

Quantitative analyses

Quantitative analyses were performed in SPSS Windows version 15.0 [243] by the author. Data were entered into SPSS by the author, and input data were checked again by her for their accuracy.

To gain an overview of the data, simple counts and prevalence rates were performed for categorical demographic variables (i.e. sex and marital status), as well as for need ratings and priority ratings of individual HESPER items. Due to the small sample size, medians (instead of means) were calculated and were presented with their ranges for continuous demographic data (i.e. age, number of children, number of years of formal education, and number of years displaced), for the total number of unmet needs recorded on the HESPER Scale, time taken to administer the HESPER Scale, and quantitative responses from 'Part A' of the participant survey.

Free-text analyses

Free-text analyses from the HESPER Scale on additional unmet needs, as well as 'Parts B', 'C' and 'D' of the participant survey, were performed in Microsoft Office Word (2007) [244] and SPSS Windows version 15.0 [243] by the author.

To gain an overview of participants' comments, these were ordered and grouped into categories according to different themes [245]. Since there was no theory being developed from the data, a synopsis based on arising themes was developed to provide an overview of participants' responses. Although more complex quantitative analyses of coded free-text data were not conducted [235, 237, 245, 246], simple counts were performed to gain information on the frequency and typicality of a coded response [236, 245].

4.3.3 Results

Respondents

Table 4.2 shows the characteristics of study participants. Out of the 11 households put forward by the Refugee Council, seven people participated in the study. Two people did not speak English sufficiently, one declined the invitation to participate, and for one household no contact details had been provided by the Refugee Council. All participants were male.

Table 4.2 Demographic characteristics of study participants during pre-testing of the HESPER Scale in the UK

	Total (n=7)
Sex, no. (%)	
Men	7 (100%)
Women	0
Median age, years	41.0 (range 31–45)
Marital status, no. (%)	
Married	7 (100%)
Not married	0
Median no. of children	3.0 (range 1–7)
Median no. of years of formal education	12.5 (range 10–21)
Median no. of years displaced	
From DRC	10.0 (range 10–11)
From Zambia (living in UK)	3.0 (range 2–3)

HESPER Scale

Length of interview

HESPER assessments took between around 15 and 60 minutes to complete, with a median of 25.0 minutes. This great variation in the length of interviews primarily depended on how much participants chose to elaborate during interviews.

Need ratings

Participants rated between 9 and 24 HESPER items as unmet need (out of a possible 32); the median was 12.0. Table 4.3 displays participants' ratings for each of the 32 HESPER items. All items were rated as unmet need ('1' rating) by at least one participant, apart from the items 'Drinking water', 'Burying and mourning the dead in your community', 'Drug use in your community', and 'Religious, cultural or spiritual practices'. The items 'Food', 'Clothing and bedding', 'Living away from home', and 'Moving around between places' were rated as unmet need by all participants.

Table 4.3 Number of participants who rated each HESPER item as unmet need during pre-testing of the HESPER Scale in the UK

Number of participants with unmet need rating (%)[1]	HESPER items
7 (100%)	'Food', 'Clothing and bedding', 'Living away from home', 'Moving around between places'
6 (85.7%)	'Making a living', 'Having a say in the aid response'
5 (71.4%)	'Separation from family members', 'Distress', 'Respect'
4 (57.1%)	'Place to live in', 'Keeping clean', 'Information about the situation', 'Aid being handed out fairly'
3 (42.9%)	'Cooking', 'Safety', 'Having enough to do during the day'
2 (28.6%)	'Toilets', 'Health care', 'Safety and protection from violence for women in your community', 'Care for people in your community who are on their own'
1 (14.3%)	'Physical health', 'Education for your children', 'Safety and protection for your children', 'Protection by the law in your community', 'Alcohol use in your community', 'Mental illness in your community', 'Care for family members in your household', 'Support from others'
0	'Drinking water', 'Burying and mourning the dead in your community', 'Drug use in your community', 'Religious, cultural or spiritual practices'

[1]All other participants rated the item as 'no need' ('0' rating), apart from the items 'Education for your children', 'Safety and protection for your children', 'Safety and protection from violence for women in your community', and 'Care for family members in your household', for which one participant gave a '9' rating (not known/not applicable) each.

Additional unmet needs

When asked to list any additional unmet needs not already mentioned on the draft HESPER Scale, the only two items which were named by more than one participant were 'Further education (i.e. following secondary school)' and 'Aid not reaching those for whom it was intended' (two participants each).

Priority ratings

Table 4.4 shows the number of participants who gave priority ratings for each of the 32 HESPER items. 'Food' was universally perceived to be the most serious problem by participants; all participants rated the item as one of their three

most serious problems, and six of them rated it as their most serious problem. Other HESPER items which were rated by at least one participant as one of their three most serious problems included 'Place to live in', Health care', 'Making a living', 'Keeping clean', 'Clothing and bedding', 'Safety', 'Separation from family members', and 'Moving around between places'. Additional unmet needs listed that were given priority ratings by participants were 'Discrimination by locals' and 'HIV' (one participant each).

Table 4.4 Number of participants who rated each HESPER item as one of their three most serious problems during pre-testing of the HESPER Scale in the UK

Number of participants who gave item a priority rating (%)	**HESPER items**
7 (100%)	'Food'
6 (85.7%)	---
5 (71.4%)	---
4 (57.1%)	---
3 (42.9%)	---
2 (28.6%)	'Place to live in', 'Health care', 'Making a living'
1 (14.3%)	'Keeping clean', 'Clothing and bedding', 'Safety', 'Separation from family members', 'Moving around between places'
0	'Drinking water', 'Cooking', 'Toilets', 'Physical health', 'Education for your children', 'Safety and protection for your children', 'Safety and protection from violence for women in your community', 'Protection by the law in your community', 'Burying and mourning the dead in your community', 'Alcohol use in your community', 'Drug use in your community', 'Mental illness in your community', 'Care for people in your community who are on their own', 'Care for family members in your household', 'Support from others', 'Religious, cultural or spiritual practices', 'Distress', 'Living away from home', 'Respect', 'Having a say in the aid response', 'Information about the situation', 'Aid being handed out fairly', 'Having enough to do during the day'

Participant survey

Quantitative results

Table 4.5 shows participants' quantitative responses from 'Part A' of the survey. Overall, participants found the draft HESPER Scale to be intelligible, comprehensive, useful, and of an adequate length.

Table 4.5 Participants' responses from 'Part A' of the participant survey during pre-testing of the HESPER Scale in the UK

Statements in participant survey	Median of responses	Range of responses[1]
The language in the interview was easy to understand.	2.0	1 – 2
The interview covered most of my previous serious problems sufficiently.	1.0	1 – 2
It was difficult giving answers in the interview.	4.0	4 – 5
The interview is useful for assessing the problems of a person.	1.0	1 – 2
The interview was too long.	4.0	4 – 5
The interview was too short.	3.0	2 – 4[2]
The interview went too fast.	4.0	3 – 5[3]
I did not like being interviewed.	5.0	4 – 5

[1] 1: strongly agree, 2: agree, 3: neither agree nor disagree, 4: disagree, 5: strongly disagree

[2] Two participants gave an 'agree' response, three gave a 'neither agree nor disagree' response, and two gave a 'disagree' response

[3] One participant gave a 'neither agree nor disagree' response, five gave a 'disagree' response, and one gave a 'strongly disagree' response

Free-text results

In the free-text parts of the participant survey, when asked about the intelligibility of the HESPER questions ('Part B'), only one participant responded that he found some of the questions "difficult to understand sometimes" but that he "did have help from you". Another participant commented that "if not your language, it can be difficult", but that he had not had any problems in understanding the questions.

In ‘Part C’ of the survey, none of the participants responded that they found the questions upsetting to talk about, though one participant admitted that he had not mentioned some private issues. Another participant stated that “we can say that we weren’t unhappy to talk about it, but a reminder that we are refugees”.

In ‘Part D’ of the survey, where participants were invited to provide further feedback on either the interview process or the draft HESPER Scale, out of the four participants who commented two remarked that the interview process was satisfactory. The other two participants who commented responded positively to affected populations being involved in the interview process, though one of them mentioned the importance of having interviewers who speak the local language, i.e. that

> “speaking to people is good, but another problem is language…you have to send people who understand refugees’ local language, who is e.g. Swahili, not someone from Europe”

4.3.4 Revisions to draft HESPER Scale

Based on pre-testing of the HESPER Scale in the UK with refugees from DRC, the phrasing of the scale’s rating system was changed from ‘unmet need’ versus ‘no need’ to ‘serious problem’ versus ‘no serious problem’ (though the term ‘serious problem’ was still understood as representing an unmet need), to maximise the intelligibility of the HESPER Scale’s rating system for interviewers and participants, and to make the rating system consistent with the phrasing of item questions. In preparation for pilot-testing of the draft scale in humanitarian settings, a temporary space was also added to the HESPER form to record the start and end time of each HESPER assessment, so that the length of each assessment could be established during pilot- and field-testing of the scale.

4.3.5 Discussion

Findings

Pre-testing of the draft HESPER Scale in the UK with a small sample of refugees from DRC confirmed that use of the scale in relevant populations was feasible, and that the project materials and interview process were appropriate. Participants found the draft HESPER Scale to be intelligible, comprehensive, and useful overall, and no major difficulties were encountered by the interviewer. Only a few minor modifications were made to the draft HESPER Scale in preparation for pilot-testing of the scale in relevant populations affected by humanitarian emergencies in low- and middle-income countries.

Limitations

The study had several limitations. One of these was the small sample size employed. However, as this exercise simply involved pre-testing of the draft HESPER Scale and other project materials in the UK before the scale was pilot-tested in relevant populations abroad, a small sample size was sufficient for its purpose.

Another limitation was that recall bias may have been present in participants' responses, as they answered questions about events which took place around three years previously whilst living in a refugee camp in Zambia. However, since the primary aim of the study was to pre-test the intelligibility, cultural applicability, and feasibility of the draft HESPER Scale and other project materials amongst a relevant population in the UK before testing commenced abroad, rather than to collect accurate data on the perceived needs present in a population, the exercise was considered sufficient, and the participant group adequate, for its purposes.

Response bias may have also been present during completion of the participant survey. Several participants chose to be administered the participant survey rather than completing it themselves, which may have biased their responses

according to a social desirability effect [247-250], for instance because participants may have wanted to please the interviewer and therefore may not have felt comfortable giving their honest opinion about the HESPER Scale, potentially resulting in overly positive responses. However, no difficulties were encountered by the interviewer when administering the HESPER Scale to participants, and participants appeared to be able to answer the HESPER questions easily, suggesting that participants' responses in the participant survey were largely accurate.

A further potential limitation of the study was that resettled refugees living in the UK may not have been representative of refugees as a whole. Indeed, it is possible that it is only particular refugee groups, for instance those with certain skill sets or abilities, who enter the resettlement program of the Refugee Council (through which participants were recruited). Furthermore, all participants were male due to DRC's cultural norms and strong gender roles of men being the head of their household [251], and therefore being responsible for talking to the interviewer; this may have made the sample even less representative. However, as the draft HESPER Scale was subsequently pilot- and field-tested in a wide range of populations affected by humanitarian emergencies (see Section 4.4 and Chapter 5), this should have counter-acted any such bias.

A final limitation was that interviews were conducted in English, which was not participants' native language. The potential shortcomings related to interviewers not being able to speak participants' native language were indeed mentioned by one participant, and two refugees contacted were unable to take part due to insufficient English abilities. However, it was ensured that all participants who took part in the interview spoke English sufficiently, and no language difficulties were encountered during the interview.

Further work

Consistent with the reasons for developing the HESPER Scale (see Section 3.3 for further details), participants commented on the importance of involving affected populations in the needs assessment process. Hence, following successful pre-testing of the draft HESPER Scale in the UK with a relevant refugee population as was described in this section, the draft scale was next pilot-tested in three population groups affected by humanitarian emergencies in low- or middle-income countries (see Section 4.4), to establish the scale's feasibility, intelligibility and cultural applicability in a wider range of population groups, as well as assessing the suitability of training materials, and testing appropriate methodologies and sample size requirements for field-testing of the HESPER Scale.

4.4 Pilot-testing of HESPER Scale in humanitarian settings

4.4.1 Introduction

This section describes pilot-testing of the draft HESPER Scale in three diverse population groups affected by humanitarian emergencies in low- or middle-income countries. This followed on from pre-testing of the draft scale in the United Kingdom (UK) with refugees from the Democratic Republic of the Congo (DRC) (see Section 4.3). The aims of pilot-testing in humanitarian settings were to establish the HESPER Scale's feasibility, intelligibility, comprehensiveness and cultural applicability, to assess the suitability of training materials (i.e. the interviewers' training manual), as well as testing appropriate methodologies and sample size requirements for field-testing of the scale, and establishing face validity and content validity of the draft scale.

This section describes the last part of 'Phase 2' of the HESPER project, as highlighted in the box below.

- *Phase 1 (2008):* Development of a first draft scale through a process of item generation and item reduction, based on first a literature review, and second a survey with humanitarian experts (Section 3.7 and Appendix E1).
- ***Phase 2 (2009):*** Preparation of the draft scale for pilot-testing (Section 4.2). Pre-testing of the draft scale in the UK with refugees from the Democratic Republic of the Congo (DRC) (Section 4.3), **and subsequent pilot-testing in Jordan with displaced Iraqi people, and with the local populations in Gaza and Sudan (Section 4.4), to assess the scale's feasibility, intelligibility, comprehensiveness and cultural applicability, to determine the suitability of training materials, and to establish face and content validity. Expert survey on the ideal length of the scale (Section 4.4).**
- *Phase 3 (2010):* Field-testing of the revised draft scale in Jordan with displaced Iraqi people, in Haiti with people living in post-earthquake displacement camps, and in Nepal with Bhutanese refugees, to assess its psychometric properties (i.e. inter-rater and test-retest reliability, internal consistency, and criterion (concurrent) validity) (Chapter 5). Study to measure the level of perceived needs in these settings, and to assess the relationship between symptoms of common mental disorder, perceived unmet needs, and past traumatic events (Chapter 6).

4.4.2 Methods

Design

Pilot-testing of the draft HESPER Scale was conducted with a wide range of participants in different settings to ensure that the scale was assessed in populations representative of those for whom it was being developed [48, 62, 207], and to ensure equal participation across different population groups [252]. Pilot-testing sites included Amman in Jordan (displaced Iraqi people), Gaza City in Gaza (local population), and Juba in South Sudan (local population).

A cross-sectional design was employed. All participants (122 in total; 40 in Jordan and Gaza each, and 42 in Sudan) met on one occasion with a local interviewer, during which:

- They were administered the draft HESPER Scale (see Appendix A2).
- They were administered a specially-designed participant survey (see Appendix C2) in which they answered questions about the HESPER Scale's intelligibility, adequacy, applicability and relevance, as well as whether there were any important items missing from the scale.
- For a sub-sample of participants, in addition to the interviewer, a silent rater made ratings on another copy of the draft HESPER Scale, to provide preliminary data on the inter-rater reliability of the draft scale, and thereby to assess the adequacy of the draft HESPER Scale and interviewers' training manual (as inter-rater reliability reflects to some extent how well interviewers are trained). Due to limited resources and time constraints, inter-rater reliability was measured for only half of the interviews (20 in Jordan and Gaza each, and 18 in Sudan).

Additionally, a sub-sample of participants (15 in Jordan, 33 in Gaza, and 12 in Sudan) chose to meet a second time to take part in a focus group discussion, during which they reported on the intelligibility, cultural acceptability, relevance and comprehensiveness of the draft HESPER Scale's items, as well as checking

the suitability of the linguistic content and concepts, and suggesting any additional missing items (see Appendix C4 for focus group discussion guide).

Following interviews, the local interviewers (four in Jordan and Gaza each, and seven in Sudan) participated in a feedback session and completed an interviewer survey (see Appendix C3 for survey), to provide feedback on the intelligibility and relevance of the draft HESPER Scale and interviewers' training manual, as well as their experience of conducting the interviews.

Furthermore, a brief survey (see Appendix C5) was conducted with members of the HESPER project's steering committee and international advisory group, to gain expert advice on the ideal length of the HESPER Scale, in terms of maximising the likelihood of the scale being used in the field by humanitarian organisations.

Samples

Pilot-testing of HESPER Scale

Members of the general adult population participated in pilot-testing of the draft HESPER Scale in Gaza (Gaza City) and Sudan (Juba) (40 and 42 participants respectively), whilst in Jordan (Amman) members of the Iraqi population who had entered the country following the 2003 invasion to Iraq participated (40 participants). All participants across sites were at least 18 years of age, as the HESPER Scale was being developed for adult populations only. There were no further inclusion/exclusion criteria.

Amman is the capital of Jordan with around 2,525,000 inhabitants, which includes a large population of Iraqi and Palestinian refugees. In 2009 (around the time of the research), there were almost 1.8 million Iraqi refugees worldwide (the second largest group of refugees after Afghans), primarily in countries neighbouring Iraq [15]. Around 15% of the Iraqi population was displaced either within or outside of Iraq [13], and together with Afghan refugees, Iraqi refugees

accounted for almost half (45%) of all refugees under the United Nations High Commissioner for Refugees (UNHCR)'s [52] responsibility worldwide. At the time of this study, there were an estimated 450,000 to 750,000 displaced Iraqi people living in Jordan [253] (though estimates vary hugely), who mainly entered Jordan after the US-led invasion to Iraq in 2003 [253, 254]. Rather than living in camps, these Iraqis tended to live dispersed across the urban areas of Jordan, in particular Amman [254]. It was members of this population who were recruited as participants for pilot-testing of the draft HESPER Scale.

Gaza City is the largest city in Gaza (and indeed within the Occupied Palestinian Territories (OPT)), with a population of about 450,000. Gaza was highly suitable as site for pilot-testing of the draft HESPER Scale due to the ongoing conflict and extremely poor humanitarian conditions. 2009, around the time of the research, was the most violent year in the OPT since the Israeli occupation began in 1967; over 4000 houses were demolished and over 50,000 houses damaged in Gaza and the West Bank, and Palestinians living in these areas were regularly exposed to violence, restrictions on their movements, discriminatory policies and regulations, harassment and intimidation [13].

Juba is the largest town in South Sudan (and was declared the capital of this newly formed country in 2011), with a population of around 250,000. Sudan was suitable as site for pilot-testing of the draft HESPER Scale, as it has been affected by several civil wars starting in 1956, the most recent of which was brought to an end by a peace agreement in January 2005 [13]. In December 2009 (around the time of this study), there were still over 4.9 million persons internally displaced due to conflict or violence in Sudan (11.6% of the total population). This made Sudan the country with the most internally displaced persons (IDPs) worldwide that year [13]. At the peak of the displacement in 2004, there were 4 million IDPs displaced in Southern Sudan alone [13]. At the time of the research in 2009, due to the humanitarian situation which prevailed, the United Nations (UN) still maintained a peace support mission throughout Sudan with a focus in the South.

Southern Sudan is still one of the poorest areas in the world, with there being limited access to basic facilities such as clean water, food and livelihoods. Inter-ethnic and inter-communal violence also increased in 2009 [13].

Convenience sampling methods were employed in the three pilot-sites, with participants being recruited by the local interviewers (see 'Procedure' section below for further details). Although random probability sampling is generally preferable to convenience sampling within quantitative research in obtaining a representative sample [65], non-probability samples are commonly employed amongst refugee populations due to missing or inadequate sampling frames [255], as well as within qualitative research [235-237] (see Section 2.3.4 for definitions of terms), and have the advantage of providing a rapid and cheap way of reaching a target group [235-237]. This sampling method was considered appropriate for this study, as it involved pilot-testing of the draft HESPER Scale rather than the testing of some effect size, or to provide accurate data on perceived needs. It was therefore not essential for the samples to be perfectly representative of the populations at large.

A sample size calculation was not appropriate due to the absence of an effect size or prevalence data being measured. Indeed, one of the aims of pilot-testing was to provide data towards sample size requirements for subsequent field-testing of the draft HESPER Scale in populations affected by humanitarian emergencies (see Chapter 5). However, the sample sizes employed were based on the expert knowledge of statisticians within the project group of a suitable sample size.

Expert survey

Members of the HESPER project's steering committee and international advisory group (see Acknowledgements section for member list) completed a short survey on the ideal length of the HESPER Scale. Their feedback was helpful due to their

experience in working for humanitarian organizations, and within relevant settings and population groups.

Settings

Interviews during pilot-testing of the draft HESPER Scale in Jordan, Gaza and Sudan were conducted in participants' own homes, which were dispersed across Amman (Jordan), Gaza City (Gaza) and Juba (Sudan). In Sudan, a few interviews were also conducted in participants' shops or quiet public spaces. The advantages of conducting interviews in participants' homes are that participants do not have to travel, which might increase response rates, and that participants are more likely to be at ease due to the familiar surroundings [103].

Focus groups in Jordan were conducted in the offices of the Market Research Organization (MRO) in Amman, in Gaza within the premises of the MARNA House Hotel in Gaza City, and in Sudan in quiet public spaces in Juba (including in one case a participant's shop).

Training and feedback sessions with local interviewers were held in the offices of MRO in Amman (Jordan), at a training centre in Gaza City (Gaza), and in a conference room of the Havana restaurant in Juba (Sudan).

Members of the HESPER project's steering committee and international advisory group completed the survey by email, as this was the most convenient, and as is common within expert surveys.

Procedure

Pilot-testing of the draft HESPER Scale (including the training of interviewers, data collection, and interviewer feedback sessions) was conducted between 1st and 10th June 2009 in Jordan, between 3rd and 15th October 2009 in Gaza, and between 2nd and 7th December 2009 in Sudan. The expert survey with members of the HESPER project group was conducted in the second half of October 2009.

Pilot-testing in Jordan was conducted in collaboration with the World Health Organization (WHO) Jordan country office [256]; a local organisation, The Market Research Organisation (MRO), was also contracted to recruit and train interviewers, and to organise the data collection. In Gaza, pilot-testing was carried out in collaboration with Fafo Institute for Applied International Studies (Fafo) [257], an independent research organisation based in Norway with much experience of conducting high-quality surveys in humanitarian settings, including in the OPT. In Sudan, the Humanitarian Accountability Partnership (HAP) [258], which is the humanitarian sector's main international self-regulatory body, collaborated for pilot-testing (see Acknowledgements section for a list of individuals involved in pilot-testing of the HESPER Scale).

The author visited Jordan from 31st May to 10th June 2009, and Sudan from 2nd to 8th December 2009 for pilot-testing of the draft HESPER Scale, to train local interviewers prior to data collection, to oversee data collection, to obtain feedback from interviewers throughout and following data collection, and to gain an impression of interviews. She was unable to visit Gaza for pilot-testing of the scale however due to the extreme difficulties in obtaining a travel permit to the area from the Israeli authorities, and the substantial security risks involved in travelling there (the UK Foreign and Commonwealth Office indeed advised against all travel to Gaza at the time of the research, and considered travel to the area to be reckless [259]).

In Gaza, training and feedback sessions with interviewers, as well as their supervision during data collection, were therefore carried out by a staff member of Fafo living in Gaza. A staff member of the WHO West Bank and Gaza country office [260] also acted as contact person in Gaza, and offered advice on project materials and research procedures. To ensure that the research procedures were clear, and that the research was conducted to a high standard and in accordance with the research protocol, prior to pilot-testing in Gaza the author developed a

detailed document outlining the research procedures, outcomes and ethical requirements for the field staff member of Fafo. She also remained in regular contact with Fafo's field staff member through email, phone and Skype before and throughout data collection.

The research procedures for pilot-testing of the draft HESPER Scale included the following:

- Obtaining of ethics approval for the study.
- Recruitment of organizations to collaborate for pilot-testing in three relevant populations affected by humanitarian emergencies.
- Translation and adaptation of project materials to the local context for pilot-testing in the three pilot-sites (Jordan, Gaza and Sudan).
- Recruitment and training of interviewers in the three pilot-sites.
- Recruitment of study participants in the three pilot-sites.
- Data collection in the three pilot-sites:
    - Participant interviews: draft HESPER Scale and specially-designed participant survey
    - Participant focus groups
    - Interviewer feedback sessions and interviewer survey
- Expert survey with members of the HESPER project's steering committee and international advisory group.

These procedures are now described in turn.

Ethics

Ethics approval for the study at all three pilot-sites was obtained from the Psychiatry, Nursing and Midwifery Research Ethics Office at King's College London (KCL) (PNM/08/09-41) (see Appendix C6 for ethics approval letters). A participant information sheet/consent form was developed and approved as part of the ethics process (see Appendix C1). Participants were assigned a participant number, which was used on all project materials instead of their names. The sheet linking participant numbers with names was kept separately at all times, to ensure participants' anonymity and confidentiality.

During interviews, all participants were either given the participant information sheet to read or it was read out to them by the interviewer (where participants were illiterate, or had difficulties reading); they were provided with a copy of the participant information sheet, and were then given time to ask any questions before interviews commenced. It was also ensured that participants understood their right to withdraw from the study at any time without having to give a reason and without further consequences.

A verbal, rather than a written, informed consent process was employed. Participants were asked by interviewers whether they agreed to participate in the interview; if they agreed, interviewers signed the participant information sheet as witness to participants' informed consent. This procedure was employed based on advice of the local collaborators in all three settings, and was consistent with the consent procedures commonly employed in other research studies conducted in humanitarian settings (e.g. see [152]). In Jordan, for instance, many Iraqis are very fearful of being deported, and are therefore wary of signing forms. In Sudan, high illiteracy rates made a verbal consent process more appropriate than a written consent procedure.

Recruitment of local organizations for collaboration

The HESPER project relied on the willingness and ability of local organizations to collaborate with testing of the draft scale, in order to facilitate access to affected populations and to provide the necessary resources locally. A cover letter inviting humanitarian organizations to participate in pilot-testing of the draft HESPER Scale was prepared by the author, peer-reviewed by the project's steering committee and international advisory group, and was then sent by email to over 80 staff members of humanitarian organizations and other humanitarian experts. Up to three follow-up emails were sent where appropriate.

Several organizations displayed an interest in pilot-testing the draft HESPER Scale. Organizations were chosen to collaborate depending on whether the setting in which they suggested to pilot-test the draft scale was relevant, the feasibility of testing in the proposed setting, as well as organizations having sufficient resources to facilitate pilot-testing (for instance in terms of staffing, access to relevant populations, and the organization's capabilities).

Translation and adaptation of project materials

The translation of project materials, including the draft HESPER Scale, participant information sheet/consent form, participant and interviewer surveys, focus group question guide, as well as an interview script for interviewers, were coordinated by the local collaborating organizations (WHO Jordan country office [256] in Jordan; Fafo [257] in Gaza; HAP International [258] in Sudan). Prior to data collection, materials were prepared and sent to staff of these organizations by the author for translation, and once translated were checked by her for inaccuracies by examining the back-translated versions and/or formats of materials.

Although interviews were conducted in Arabic in all three pilot-sites, project materials were prepared separately in each of the settings, since Arabic dialects vary hugely between countries and regions. Materials were translated or adapted according to what was feasible in each of the three sites, based on the resources available.

In Jordan, project materials were translated into Arabic through a process of translation and back-translation according to WHO guidelines [261]. This entailed:

1. The translation of project materials from English into Arabic by a translator fluent in both languages.
2. The back-translation of the translated documents into English by a different bilingual translator.

3. The revision of the original translations into final versions by the two translators, by comparing the original English versions of the documents with the back-translated English versions, and thereby identifying and resolving any mistakes in the translations.

Back-translation methods are commonly considered to be the gold standard within scientific research, as they ensure a scale's semantic (or functional) equivalence [111] (see Section 2.4 for further details), lessen the possibility of meanings being lost in translation, and reduce bias in the translation process [236, 262].

In Gaza, all project materials were adapted into the local Arabic dialect by the field staff member of Fafo, based on the Arabic materials that had been used previously during pilot-testing of the draft HESPER Scale in Jordan, as the two dialects were sufficiently similar. A bilingual colleague of his commented on these adaptations, resulting in a few small changes being made.

In Sudan, as Juba Arabic varies greatly from the Arabic spoken in the Middle East, and the translations from Jordan and Gaza were therefore not useful, all project materials (apart from the interviewer survey, which was completed in English) were newly translated from English into Juba Arabic by a contracted translator. Since most of the population in Juba is unable to read Arabic script (as Juba Arabic is primarily a spoken language, and very different from formal Arabic), the Juba Arabic was spelt out in Latin script. As back-translation methods were not viable due to resource and logistical constraints, to ensure the accuracy and intelligibility of translations, the translated project materials were discussed by a group of seven bilingual local interviewers, and any modifications were agreed by the group. Minor changes were made to 13 of the HESPER Scale's items during this process, which primarily involved removing, changing or adding single letters in a word. For a few items a word was replaced.

As the development of the HESPER Scale was an ongoing process, minor changes were made to project materials between pilot-testing sites where this improved or clarified materials. These primarily involved revisions to the wording of several HESPER item headings (see footnotes of Table 4.8 on page 126 for details) and accompanying item questions. Furthermore, in Jordan 34 items were included in the draft HESPER Scale, whilst in Gaza and Sudan 32 items were included; the items 'Information about aid' and 'Information about your legal rights' were included as separate items in Jordan but were incorporated into the items 'Getting help from aid agencies' and 'Law and justice in your community' respectively in Gaza and Sudan, following suggestions by interviewers and participants in Jordan.

Recruitment of interviewers

Native interviewers who were familiar with the local conditions were employed during pilot-testing of the draft HESPER Scale, consistent with HESPER assessment methods post-development [167], and in line with comments by one of the Congolese participants interviewed during pre-testing of the draft scale in the UK (see Section 4.3). Fifteen interviewers were recruited in total by the collaborating agencies across the three pilot-testing sites – four in Jordan and Gaza respectively (two male, two female), and seven in Sudan (three male, four female). Interviewers in each of the three settings were of the same cultural background as participants (i.e. Iraqi in Jordan, Palestinian in Gaza, and Sudanese in Sudan), to ensure that they spoke the same Arabic dialect as participants, had an understanding of their cultural norms, and were better able to gain participants' trust [255]. As is the minimum requirement for HESPER interviewers [167], in Jordan and Sudan all interviewers were educated to at least high-school level (i.e. 12 years of education); in Gaza all interviewers had Higher Education degrees.

Training of interviewers

Interviewers in all three pilot-sites received one to one-and-a-half days training. In Jordan, training was conducted by a staff member of MRO, with assistance from the author, as well as the main collaborator of the HESPER project at WHO, and the key local collaborator at WHO Jordan. In Gaza, training was conducted by the staff member of Fafo, and in Sudan interviewers were trained by the author.

Training was conducted in both Arabic and English in Jordan (as interviewers were fluent in both languages, and the members of the HESPER project group who attended training sessions did not speak Arabic), in Arabic in Gaza, and in English in Sudan (though interviewers were given time to also practice interviews in Juba Arabic). An English version of the interviewers' training manual was used in all three settings, due to interviewers being able to understand English sufficiently in all three sites, and a lack of resources available to translate the manual into Arabic. However, an Arabic three-page interview script summarising the HESPER assessment process was provided to interviewers, to assist them in conducting interviews in Arabic.

Training consisted of interviewers reading the interviewers' training manual (both alone and as a group) and discussing any questions that arose from the manual, as well as an overview of the reasons for pilot-testing of the draft HESPER Scale, and expected outputs. Half a day was spent on practicing the HESPER assessment process through exercise questions provided in the training manual as well as role plays. Moreover, interviewers were introduced to the participant survey, and were given time to practice administering the survey. Logistical arrangements were also made during training sessions.

Following the suggestion by one of the interviewers in Jordan (the first pilot-site), in Gaza interviews commenced two days after training had been completed, to give interviewers some additional time to re-read the training manual and to

practice interviews; however this was not possible in Sudan due to time constraints.

Recruitment of participants

Although convenience samples were employed (see 'Design' section above), a broad sample was ensured in the three pilot-sites by recruiting participants from different neighbourhoods, genders, ages and socio-economic backgrounds (as an example, see Table 4.6 for the sample criteria used in Gaza). Whilst in Jordan and Gaza interviewers recruited participants through contacts of their friends and families (interviewers were instructed not to recruit participants who they knew directly), in Sudan interviewers recruited participants by walking around different neighbourhoods and asking members of the local population to take part.

Table 4.6 Sample criteria used during pilot-testing of the HESPER Scale in Gaza

No.	Gender	Age	Working	Refugee	Education
1	F	18 - 30	Yes	Yes	Higher than secondary
2	F	18 - 30	Yes	No	No level completed
3	F	18 - 30	No	Yes	Secondary
4	F	18 - 30	No	No	No level completed
5	F	18 - 30	No	Yes	Intermediate
6	F	18 - 30	No	No	Elementary
7	F	18 - 30	No	Yes	Secondary
8	F	30 - 40	No	No	No level completed
9	F	30 - 40	No	Yes	Higher than secondary
10	F	30 - 40	No	No	Secondary
11	F	30 - 40	No	Yes	Elementary
12	F	30 - 40	No	No	Intermediate
13	F	30 - 40	No	Yes	Secondary
14	F	30 - 40	No	No	Higher than secondary
15	F	40 - 50	No	Yes	Secondary
16	F	40 - 50	No	No	Intermediate
17	F	40 - 50	No	Yes	Secondary
18	F	40 - 50	No	No	Higher than secondary
19	F	50+	No	Yes	Intermediate

20	F	50+	No	No	Higher than secondary
21	M	18 - 30	Yes	Yes	No level completed
22	M	18 - 30	Yes	No	Secondary
23	M	18 - 30	Yes	Yes	Higher than secondary
24	M	18 - 30	Yes	No	Elementary
25	M	18 - 30	Yes	Yes	Secondary
26	M	18 - 30	Yes	No	Intermediate
27	M	18 - 30	Yes	Yes	Higher than secondary
28	M	30 - 40	No	No	Higher than secondary
29	M	30 - 40	Yes	Yes	Elementary
30	M	30 - 40	Yes	No	Secondary
31	M	30 - 40	Yes	Yes	Higher than secondary
32	M	30 - 40	No	No	Intermediate
33	M	30 - 40	Yes	Yes	Secondary
34	M	40 - 50	No	No	Higher than secondary
35	M	40 - 50	No	Yes	Intermediate
36	M	40 - 50	No	No	Secondary
37	M	40 - 50	No	Yes	Secondary
38	M	50+	No	No	No level completed
39	M	50+	No	Yes	Intermediate
40	M	50+	No	No	Elementary

Table taken from an unpublished report by Fafo [257] describing pilot-testing of the HESPER Scale in Gaza.

Data collection – Interviews

Interviews with 40 participants in Jordan and Gaza each, and 42 in Sudan, were conducted between 2nd and 10th June 2009 in Jordan, between 5th and 15th October 2009 in Gaza, and between 4th and 5th December 2009 in Sudan. Both in Jordan and Gaza, each of the four interviewers conducted ten interviews, and additionally acted as silent rater for five participants each. In Sudan, each of the seven interviewers conducted six interviews, with three of them also acting as silent rater for six interviews each (the other four interviewers conducted the participant focus groups instead of acting as silent raters). Interviewers met with supervisors at least every few days (including after the first interview day) in Jordan, and at the end of each day in Gaza throughout data collection, and were

contacted by phone at the end of each interview day in Sudan, to discuss any potential problems.

The author silently observed 14 (35.0%) interviews in Jordan (assisted by a translator) and three (7.1%) interviews in Sudan, to ensure that the interviews were of a high quality, as well as giving the author an insight into the interview process and environment to aid the development of the HESPER Scale further. The main collaborator of the HESPER project at WHO observed one further interview in Jordan. In Gaza, the field staff member of Fafo observed ten (25.0%) interviews.

Interviews were conducted in the local Arabic dialect in Jordan and Gaza, and primarily in Juba Arabic in Sudan; all Arabic data were then translated into English following interviews. However, as a wide range of languages are spoken by the population in Juba, with Juba Arabic and English being the most commonly shared languages, English translations were offered by interviewers if preferred by participants. In accordance with the cultural norms in the three pilot-sites, and as advised by the local collaborating organisations, in Jordan all participants, and the majority of participants in Gaza and Sudan, were interviewed by interviewers of the same gender (80.0% and 76.2% of women were interviewed by female interviewers in Gaza and Sudan respectively, and 80.0% and 85.7% of men were interviewed by male interviewers in Gaza and Sudan respectively) [255].

Each participant met with a local interviewer on one occasion. Once participants had given their informed consent to take part in the interview (see section on 'Ethics' above), they were administered the draft HESPER Scale (see Appendix A2) by the interviewer. In line with how the HESPER Scale was intended to be used post-development [167], administration of the scale involved participants answering questions about their current perceived needs for each of the 32 draft HESPER Scale's items, with interviewers rating each item based on participants'

responses. Where silent raters were present (for 20 participants in both Jordan and Gaza, and 18 participants in Sudan), they completed an additional copy of the draft HESPER Scale by silently observing the interview.

Following the administration of the draft HESPER Scale, participants were then either administered the specially-designed participant survey (see Appendix C2) by interviewers, or completed it themselves where possible (i.e. if they were sufficiently literate and willing). In the first part of the survey, participants indicated whether they agreed or disagreed with ten statements about the intelligibility, comprehensiveness, usefulness, appropriateness, and length of the draft HESPER Scale. A simple dichotomous 'Yes'/'No' format was employed, to simplify the response process for participants, as a more sophisticated Likert-Scale [241] was considered too complex by the local collaborating organisations. As was the case during pre-testing of the draft HESPER Scale in the UK (see Section 4.3), in order to reduce acquiescence bias [242], the direction in which questions were phrased was alternated, so that a 'Yes' response sometimes elicited a positive response and other times a negative response. In the following parts of the survey, participants were asked two free-text questions about the intelligibility of the HESPER Scale, and their experience of the interview overall. Participants in Gaza and Sudan were also asked to suggest what they considered to be an ideal length for the interview.

At the end of interviews, participants were thanked for their participation, were given the opportunity to ask any further questions, and were provided with the local collaborating agencies' contact details.

Data collection – Focus groups

Following interviews, in Jordan and Gaza all participants were invited to take part in a focus group discussion, whilst in Sudan 24 of the 42 participants were invited to the focus groups due to logistical difficulties in contacting participants by phone to arrange suitable times. In total, 60 participants chose to take part

across the three pilot-sites (49.2% of the 122 study participants); 15 (37.5%) participants in Jordan (seven men, eight women), 33 (82.5%) in Gaza (16 men, 17 women), and 16 (66.7% of those who were invited) in Sudan (eight male, eight female).

Four focus groups were conducted in each of the three pilot-sites, consisting of between three (for one of the groups) and four participants in Jordan, between seven and ten participants in Gaza, and between two (for one of the groups) and four participants in Sudan. Groups were separated by gender (i.e. two focus groups per gender), consistent with cultural norms. Whilst in Jordan and Gaza focus groups were stratified by age as well as by gender (i.e. older vs. younger adults, for each gender), in Sudan this was not possible due to the logistical constraints of gathering participants together.

Participants were recruited and gathered for focus group discussions according to what was feasible in each of the three pilot-sites. In Jordan and Gaza, where participants agreed to participate in a focus group discussion, their name and telephone number was recorded, so that a date and time could subsequently be arranged. This sheet was kept separately from all project materials and was not retained after the research process was completed, to ensure participants' anonymity and confidentiality. In Sudan, due to the logistical difficulties in contacting participants by phone, focus groups were conducted by interviewers in the afternoon with those participants who they had interviewed that morning; four interviewers were divided into two pairs of two according to gender, who then conducted two focus groups per pair (one of whom facilitated the discussion, and the other took notes).

In Jordan, focus groups were facilitated in Arabic by a female Jordanian staff member of MRO who had much experience of conducting focus groups, and in Gaza in Arabic by the male coordinating field staff member of Fafo. In Sudan, focus groups were primarily conducted in Juba Arabic by the local interviewers,

with English translations being offered if requested by participants. The author silently observed all four focus groups in Jordan (assisted by a translator), and one of the focus groups in Sudan, to oversee and gain an impression of the discussions. An assistant fluent in both English and Juba Arabic (a Ugandan national living in Juba) attended a further two focus group discussions in Sudan for quality-control.

During focus group discussions, in line with previous research on the translation and cultural adaptation of instruments [263], participants commented on the intelligibility, relevance, cultural acceptability, and suitability of each of the draft HESPER Scale's items, as well as suggesting missing items for the scale (see Appendix C4 for focus group instructions). Snacks and drinks were provided for participants. In Jordan, discussions were recorded by tape, and were then transcribed and translated into English by staff of MRO. In Gaza and Sudan, an interviewer took notes (in Arabic in Gaza, which was then translated into English; and in English in Sudan, as Juba Arabic is primarily a spoken language).

Interviewer feedback sessions

Following the completion of all interviews, in each of the three pilot-sites the local interviewers participated in a feedback session, to provide feedback on their experiences of conducting the interviews, make any suggestions to improve the HESPER Scale, and discuss any problems they had encountered. These sessions were facilitated by the author in Jordan and Sudan in English, and by the staff member of Fafo in Gaza in Arabic (which was then translated into English).

As part of the feedback session, interviewers first completed an interviewer survey (see Appendix C3), which was completed anonymously to encourage truthful responses, and which was completed prior to the group discussion so as to avoid interviewers' opinions being influenced by each other. The first part of the survey involved rating 13 statements about the intelligibility, ease, length, and usefulness of the interviewers' training manual and draft HESPER Scale. To

make it consistent with the participant survey, a simple 'Yes'/'No' response format was employed. In the next part of the survey, interviewers answered free-text questions about the quality of the interviewers' training manual, and the ease of rating HESPER items, as well as commenting further on any aspect of the interview process. In Gaza and Sudan, interviewers also suggested what they considered to be an ideal length for a HESPER interview.

Following completion of the survey, interviewers discussed their experiences of the interview process in a group, including what went well, what did not go well, any suggestions for changes to the research process, and any recommended revisions to the draft HESPER Scale or interviewers' training manual.

Expert survey with members of project group

Twelve members of the HESPER project's steering committee and international advisory group were sent an email on 23rd October 2009, inviting them to complete a brief survey on the ideal length of the HESPER Scale. To ensure that participants had the appropriate expertise, only those members of the project group with sufficient experience of working within humanitarian organizations, or in the field in relevant settings, were invited to take part. The survey included five free-text questions relating to the ideal length of a HESPER assessment, both in terms of administration time as well as the number of items (see Appendix C5 for survey). Expert participants were given two weeks to reply to the survey. All apart from one participant (who submitted the survey a week late due to having been busy working in the field) submitted the survey within the specified timeframe.

Analyses

Quantitative analyses

All quantitative data analyses were performed in SPSS Windows version 15.0 [243] by the author. Data were input into SPSS by the author, and were checked again by her for their accuracy, i.e. she checked twice that the translated data

had been entered correctly, and also checked the data against the original Arabic versions.

To gain an overview of the data, simple counts and prevalence rates were performed for categorical demographic variables (i.e. sex, marital status, level of education, and religion), for need ratings and priority ratings of individual HESPER items, number of participants who listed additional unmet needs on the draft HESPER Scale, and dichotomous responses in the first parts of the participant and interviewer surveys. Means and standard deviations were calculated for continuous demographic data (i.e. age, number of children, and number of years displaced), total number of unmet needs recorded on the draft HESPER Scale, number of additional unmet needs listed on the HESPER Scale, and time taken to administer the draft HESPER Scale.

To get an overview of the relative importance of individual HESPER items, items were ranked according to their need ratings and priority ratings. For need ratings, this involved ranking HESPER items according to the number of participants who had given each item an unmet need rating. For priority ratings, each HESPER item was assigned a score based on participants' priority ratings; for each participant, where the item was considered the most serious problem, the item was assigned a 3, where the item was considered the second most serious problem, a 2 was assigned, where the item was considered the third most serious problem, a 1 was assigned, and where the item was not considered one of the participant's three most serious problems, a 0 was assigned. Overall rankings for priority ratings were derived for each HESPER item by calculating the sums of these scores across participants, and then ranking them (with the highest score being given a ranking of 1).

To gain an overview of the relative importance of HESPER items being included in the scale, items were also assigned an overall ranking based on both their average rankings of need ratings and priority ratings across the three pilot-sites,

as well as the survey during 'Phase 1' of the project in which expert participants rated potential HESPER items on a scale of 1 to 10 in terms of their importance for inclusion into the HESPER Scale (see Appendix E1 for further details). Overall rankings for HESPER items were calculated by dividing each ranking by the variable's maximum ranking, then adding these up, dividing by 3 (for example for the item 'Income and livelihood': (1/32) (need rankings) + (1/30) (priority rankings) + (6/31) (expert survey rankings) / 3)), and then ranking items (i.e. the smallest number was assigned a ranking of 1, the next smallest a ranking of 2 etc).

To assess preliminary inter-reliability statistics for the draft HESPER Scale, intraclass correlation coefficients (ICCs) (absolute agreement) [264] were computed for total number of unmet needs on the draft HESPER Scale, and Cohen's kappas [265] and percentage agreements for individual HESPER items [103]. Cronbach's alphas [266] were calculated to measure the draft HESPER Scale's internal consistency; an inter-item correlation matrix for individual HESPER items across the three sites was computed to check whether any items could be combined into one item (i.e. whether any items had correlations above 0.8). '0' (no need) and '9' (not known/not applicable) ratings were combined into one rating for this, to avoid large numbers of missing values (as otherwise '9' ratings would have had to be excluded from the analyses). This was considered acceptable, as what is most important within humanitarian assessment is whether a need is present ('1' rating) or not ('0' and '9' ratings); the distinction between '0' and '9' ratings is therefore less useful.

Free-text analyses

Free-text data were analysed in Microsoft Word 2007 [267] and Microsoft Excel 2007 [268] by the author. More sophisticated qualitative programs were not used, since only basic qualitative techniques were employed, and the data were relatively brief. Free-text data included additional unmet needs listed on the draft HESPER Scale; open-ended questions on the participant, interviewer and

expert surveys; as well as responses from the participant focus groups and interviewer feedback sessions.

As was the case during pre-testing of the draft HESPER Scale in the UK, free-text data were summarised and analysed by categorising and counting responses [236, 245], to gain an overview of participants' comments (see 'Free-text analyses' part of Section 4.3 for further details). Furthermore, for the categorised data on additional unmet needs on the draft HESPER Scale, whilst those additional unmet needs listed by participants that corresponded to existing HESPER items were assigned to matching HESPER items, those needs which did not seem to fit any of the existing HESPER items were treated as separate items during the analyses. Where it was arbitrary whether an additional unmet need listed corresponded to any of the HESPER items, it was analysed as separate item for reasons of transparency (for example child abuse could have been assigned to the HESPER item 'Safety and protection for your children', but was instead kept as separate category).

4.4.3 Results

Respondents

Pilot-testing

Table 4.7 displays the characteristics of the 122 study participants in the three pilot-sites (40 in Jordan and Gaza each, and 42 in Sudan). The samples varied greatly across sites in terms of age (participants in Gaza and Sudan were younger than those in Jordan on average), marital status and number of children (in Gaza far fewer participants were married, and had fewer children, than in the other two samples), level of education (participants in Jordan were the most educated, those in Sudan the least educated), and religion (in Jordan and Gaza the majority of participants were Muslim, whereas in Sudan most of them were Christian).

Table 4.7 Demographic characteristics of study participants in the three pilot-sites

	Total (n=122)	**Jordan (n=40)**	**Gaza (n=40)**	**Sudan (n=42)**
Sex, no. (%)				
Men	59 (48.4%)	20 (50.0%)	20 (50.0%)	19 (45.2%)
Women	62 (50.8%)	20 (50.0%)	20 (50.0%)	22 (52.4%)
Mean age, years	37.58	44.88	33.23	34.79
	(SD=13.21)	(SD=12.1)	(SD=11.96)	(SD=12.7)
Marital status, no. (%)				
Married	86 (70.5%)	29 (72.5%)	22 (55.0%)	35 (83.3%)
Unmarried	26 (21.3%)	3 (7.5%)	16 (40.0%)	7 (16.7%)
Widowed	9 (7.4%)	8 (20.0%)	1 (2.5%)	0
Divorced/separated	1 (0.8%)	0	1 (2.5%)	0
Mean no. of children	2.57	2.95	1.83	2.95
	(SD=2.49)	(SD=2.37)	(SD=2.35)	(SD=2.61)
Level of education[1], no. (%)				
Illiterate/No formal education	10 (8.2%)	0	3 (7.5%)	7 (16.7%)
Primary/elementary school	35 (28.7%)	5 (12.5%)	14 (35.0%)	16 (38.1%)
Secondary school	34 (27.9%)	13 (32.5%)	7 (17.5%)	14 (33.3%)
Post-secondary, incl. University	42 (34.4%)	22 (55.0%)	16 (40.0%)	4 (9.5%)
Religion, no. (%)				
Muslim	75 (61.5%)	30 (75.0%)	39 (97.5%)	6 (14.3%)
Christian	35 (28.7%)	1 (2.5%)	1 (2.5%)	33 (78.6%)
Yazidi	5 (4.1%)	5 (12.5%)	0	0
Sabean	4 (3.3%)	4 (10.0%)	0	0
Mean no. of years displaced[2]	4.38	3.03	N/A	6.37
	(SD=6.91)	(SD=1.66)		(SD=10.49)

Numbers do not always add up to total number of participants due to missing data.

[1] In Iraq primary school includes grades 1 – 6, and secondary school grades 7 –12; in Gaza elementary school includes grades 1 – 10, and secondary school grades 11 – 12; in Sudan primary school includes grades 1 – 8, and secondary school grades 9 – 11.

[2] This variable is included for Jordan and Sudan only, as it was not relevant in Gaza.

Expert survey

Ten (83.3%) (eight male, two female) of the 12 members of the HESPER project's steering committee and international advisory group who were invited to take part in the expert survey completed the survey. A further (male) member offered his general advice rather than answering the set questions in the survey.

HESPER Scale

Time taken to administer

On average (mean figures), the draft HESPER Scale took 27.09 (SD=10.15) minutes to be administered across the three pilot-sites. In Jordan, the average was 24.15 (SD=7.5) minutes (ranging between 9 and 43 minutes); in Gaza it was 22.08 (SD=5.48) minutes (ranging between 10 and 38 minutes); and in Sudan it was 37.97 (SD=10.25) minutes (ranging between 18 and 70 minutes).

Total number of unmet needs

On average (mean figures), across pilot-sites 14.5 (SD=6.39) of the draft HESPER Scale's individual need items (34 items in Jordan, and 32 in Gaza and Sudan) were rated as unmet need by participants. In Jordan, the average was 14.7 (SD=7.04) (ranging between 0 and 28); in Gaza it was 13.03 (SD=4.57) (ranging between 5 and 27); and in Sudan it was 15.71 (SD=7.06) (ranging between 3 and 28).

Need ratings

Table 4.8 shows the need ratings given to individual HESPER items by participants across the three pilot-sites. All items were rated as unmet need (i.e. serious problem) by at least one participant in each of the three sites.

In Jordan, the item 'Making a living' was rated as unmet need by the most participants (80.0%), followed by 'Aid being handed out fairly' (79.5%), 'Separation from family members' (75.0%), 'Distress' (75.0%), 'Living away from home' (75.0%), and 'Mental illness in your community' (75.0%). Conversely,

items that were rated as unmet need by very few participants included ‘Alcohol use in your community’ (7.5%) and ‘Drug use in your community’ (2.5%).

In Gaza, items which were rated as unmet need by the most participants were ‘Law and justice in your community’ (95.0%), ‘Mental illness in your community’ (82.5%), ‘Participation in the aid response’ (82.5%), ‘Safety and protection from violence for women in your community’ (75.0%), ‘Safety’ (72.5%), ‘Distress’ (72.5%), and ‘Drug use in your community’ (70.0%). Items which few participants rated as unmet need included ‘Clothing, shoes and bedding’ (7.5%) and ‘Information about the crisis situation’ (5.0%).

In Sudan, items which were commonly rated as unmet need by participants included ‘Income and livelihood’ (78.6%), ‘Health care’ (76.2%), ‘Food’ (69.0%), ‘Drinking water’ (69.0%), and ‘Care for family members’ (65.9%). The items ‘Religious, cultural and spiritual practices’ and ‘Burying and mourning the dead in your community’ were rated as unmet need by fewest participants (7.3% and 7.1% respectively).

Table 4.8 Number of participants (% in brackets) in the three pilot-sites who rated each of the draft HESPER Scale's items as unmet need (i.e. serious problem), no need (i.e. no serious problem), or did not answer (i.e. not known, not applicable, or answer refused)

HESPER items and ratings	Total (n=122)	Jordan (n=40)	Gaza (n=40)	Sudan (n=42)
1. Making a living[1]				
Unmet need	90 (73.8%)	32 (80.0%)	25 (62.5%)	33 (78.6%)
No need	30 (24.6%)	8 (20.0%)	15 (37.5%)	7 (16.7%)
No answer	2 (1.6%)	0	0	2 (4.8%)
2. Mental illness in your community				
Unmet need	82 (67.2%)	30 (75.0%)	33 (82.5%)	19 (45.2%)
No need	30 (24.6%)	9 (22.5%)	4 (10.0%)	17 (40.5%)
No answer	10 (8.2%)	1 (2.5%)	3 (7.5%)	6 (14.3%)
3. Distress				
Unmet need	78 (64.5%)	30 (75.0%)	29 (72.5%)	19 (46.3%)
No need	39 (32.2%)	10 (25.0%)	11 (27.5%)	18 (43.9%)
No answer	4 (3.3%)	0	0	4 (9.8%)
4. Having a say in the aid response[1]				
Unmet need	77 (63.6%)	26 (65.0%)	33 (82.5%)	18 (43.9%)
No need	20 (16.5%)	6 (15.0%)	6 (15.0%)	8 (19.5%)
No answer	24 (19.8%)	8 (20.0%)	1 (2.5%)	15 (36.6%)
5. Protection by the law for people in your community[1]				
Unmet need	77 (63.1%)	15 (37.5%)	38 (95.0%)	24 (57.1%)
No need	33 (27.0%)	23 (57.5%)	2 (5.0%)	8 (19.0%)
No answer	12 (9.8%)	2 (5.0%)	0	10 (23.8%)
6. Health care				
Unmet need	76 (62.3%)	22 (55.0%)	22 (55.0%)	32 (76.2%)
No need	42 (34.4%)	17 (42.5%)	18 (45.0%)	7 (16.7%)
No answer	4 (3.3%)	1 (2.5%)	0	3 (7.1%)
7. Aid being handed out fairly[1]				
Unmet need	71 (58.7%)	31 (79.5%)	24 (60.0%)	16 (38.1%)
No need	31 (25.6%)	7 (17.9%)	13 (32.5%)	11 (26.2%)
No answer	19 (15.7%)	1 (2.6%)	3 (7.5%)	15 (35.7%)
8. Care for people in your community who are on their own				
Unmet need	70 (57.4%)	22 (55.0%)	21 (52.5%)	27 (64.3%)
No need	35 (28.7%)	6 (15.0%)	18 (45.0%)	11 (26.2%)
No answer	17 (13.9%)	12 (30.0%)	1 (2.5%)	4 (9.5%)

9. Separation from family members[1]				
Unmet need	66 (54.5%)	30 (75.0%)	16 (40.0%)	20 (48.8%)
No need	55 (45.5%)	10 (25.0%)	24 (60.0%)	21 (51.2%)
No answer	0	0	0	0
10. Living away from home				
Unmet need	60 (49.6%)	30 (75.0%)	8 (20.0%)	22 (53.7%)
No need	57 (47.1%)	10 (25.0%)	31 (77.5%)	16 (39.0%)
No answer	4 (3.3%)	0	1 (2.5%)	3 (7.3%)
11. Moving around between places				
Unmet need	60 (49.2%)	14 (35.0%)	22 (55.0%)	24 (57.1%)
No need	58 (47.5%)	26 (65.0%)	18 (45.0%)	14 (33.3%)
No answer	4 (3.3%)	0	0	4 (9.5%)
12. Safety				
Unmet need	60 (49.2%)	11 (27.5%)	29 (72.5%)	20 (47.6%)
No need	59 (48.4%)	29 (72.5%)	11 (27.5%)	19 (45.2%)
No answer	3 (2.5%)	0	0	3 (7.1%)
13. Place to live in				
Unmet need	58 (47.9%)	21 (53.8%)	11 (27.5%)	26 (61.9%)
No need	62 (51.2%)	18 (46.2%)	29 (72.5%)	15 (35.7%)
No answer	1 (0.8%)	0	0	1 (2.4%)
14. Drinking water				
Unmet need	58 (47.5%)	19 (47.5%)	10 (25.0%)	29 (69.0%)
No need	64 (52.5%)	21 (52.5%)	30 (75.0%)	13 (31.0%)
No answer	0	0	0	0
15. Support from others				
Unmet need	56 (46.3%)	18 (45.0%)	15 (37.5%)	23 (56.1%)
No need	60 (49.6%)	19 (47.5%)	25 (62.5%)	16 (39.0%)
No answer	5 (4.1%)	3 (7.5%)	0	2 (4.9%)
16. Having enough to do during the day[1]				
Unmet need	56 (45.9%)	18 (45.0%)	22 (55.0%)	16 (38.1%)
No need	61 (50.0%)	22 (55.0%)	18 (45.0%)	21 (50.0%)
No answer	5 (4.1%)	0	0	5 (11.9%)
17. Safety and protection from violence for women in your community				
Unmet need	51 (41.8%)	10 (25.0%)	30 (75.0%)	11 (26.2%)
No need	39 (32.0%)	16 (40.0%)	7 (17.5%)	16 (38.1%)
No answer	32 (26.2%)	14 (35.0%)	3 (7.5%)	15 (35.7%)
18. Drug use in your community				
Unmet need	51 (41.8%)	1 (2.5%)	28 (70.0%)	22 (52.4%)
No need	49 (40.2%)	26 (65.0%)	10 (25.0%)	13 (31.0%)
No answer	22 (18.0%)	13 (32.5%)	2 (5.0%)	7 (16.7%)

19. Physical health				
Unmet need	51 (41.8%)	23 (57.5%)	11 (27.5%)	17 (40.5%)
No need	66 (54.1%)	16 (40.0%)	29 (72.5%)	21 (50.0%)
No answer	5 (4.1%)	1 (2.5%)	0	4 (9.5%)
20. Care for family members in your household[1]				
Unmet need	49 (40.5%)	17 (42.5%)	5 (12.5%)	27 (65.9%)
No need	57 (47.1%)	15 (37.5%)	31 (77.5%)	11 (26.8%)
No answer	15 (12.4%)	8 (20.0%)	4 (10.0%)	3 (7.3%)
21. Respect				
Unmet need	49 (40.5%)	16 (40.0%)	19 (47.5%)	14 (34.1%)
No need	66 (54.5%)	23 (57.5%)	20 (50.0%)	23 (56.1%)
No answer	6 (5.0%)	1 (2.5%)	1 (2.5%)	4 (9.8%)
22. Keeping clean				
Unmet need	46 (39.0%)	19 (47.5%)	5 (12.5%)	22 (57.9%)
No need	72 (61.0%)	21 (52.5%)	35 (87.5%)	16 (42.1%)
No answer	0	0	0	0
23. Food				
Unmet need	45 (36.9%)	10 (25.0%)	6 (15.0%)	29 (69.0%)
No need	75 (61.5%)	30 (75.0%)	34 (85.0%)	11 (26.2%)
No answer	2 (1.6%)	0	0	2 (4.8%)
24. Toilets				
Unmet need	43 (35.2%)	13 (32.5%)	9 (22.5%)	21 (50.0%)
No need	78 (63.9%)	27 (67.5%)	31 (77.5%)	20 (47.6%)
No answer	1 (0.8%)	0	0	1 (2.4%)
25. Information about the crisis situation[2]				
Unmet need	39 (32.0%)	17 (42.5%)	2 (5.0%)	20 (47.6%)
No need	65 (53.3%)	22 (55.0%)	30 (75.0%)	13 (31.0%)
No answer	18 (14.8%)	1 (2.5%)	8 (20.0%)	9 (21.4%)
26. Clothing and bedding[1]				
Unmet need	38 (31.1%)	16 (40.0%)	3 (7.5%)	19 (45.2%)
No need	82 (67.2%)	24 (60.0%)	37 (92.5%)	21 (50.0%)
No answer	2 (1.6%)	0	0	2 (4.8%)
27. Alcohol use in your community				
Unmet need	37 (30.3%)	3 (7.5%)	7 (17.5%)	27 (64.3%)
No need	68 (55.7%)	25 (62.5%)	29 (72.5%)	14 (33.3%)
No answer	17 (13.9%)	12 (30.0%)	4 (10.0%)	1 (2.4%)
28. Safety and protection for your children				
Unmet need	36 (29.5%)	13 (32.5%)	11 (27.5%)	12 (28.6%)
No need	35 (28.7%)	11 (27.5%)	5 (12.5%)	19 (45.2%)
No answer	51 (41.8%)	16 (40.0%)	24 (60.0%)	11 (26.2%)

29. Education for your children				
Unmet need	35 (28.7%)	5 (12.5%)	6 (15.0%)	24 (57.1%)
No need	32 (26.2%)	16 (40.0%)	9 (22.5%)	7 (16.7%)
No answer	55 (45.1%)	19 (47.5%)	25 (62.5%)	11 (26.2%)
30. Cooking				
Unmet need	34 (27.9%)	8 (20.0%)	5 (12.5%)	21 (50.0%)
No need	85 (69.7%)	32 (80.0%)	35 (87.5%)	18 (42.9%)
No answer	3 (2.5%)	0	0	3 (7.1%)
31. Burying and mourning the dead in your community				
Unmet need	18 (14.8%)	6 (15.0%)	9 (22.5%)	3 (7.1%)
No need	86 (70.5%)	27 (67.5%)	29 (72.5%)	30 (71.4%)
No answer	18 (14.8%)	7 (17.5%)	2 (5.0%)	9 (21.4%)
32. Religious, cultural or spiritual practices				
Unmet need	14 (11.6%)	4 (10.0%)	7 (17.5%)	3 (7.3%)
No need	100 (82.6%)	34 (85.0%)	33 (82.5%)	33 (80.5%)
No answer	7 (5.8%)	2 (5.0%)	0	5 (12.2%)
Information about aid[3]				
Unmet need	N/A	22 (55.0%)	N/A	N/A
No need		17 (42.5%)		
No answer		1 (2.5%)		
Information about your legal rights[3]				
Unmet need	N/A	16 (40.0%)	N/A	N/A
No need		20 (50.0%)		
No answer		4 (10.0%)		

Items are listed and ranked in descending order of total unmet need ratings.

Figures do not always add up to total number of participants due to missing data.

[1] Item headings are listed as phrased during pilot-testing in Jordan (the first pilot-site). Revisions were made to a few items following this. Item headings were phrased as follows in Gaza (item rankings stated in brackets): 'Livelihood' (1), 'Participation in the aid response' (4), 'Law and justice in your community' (5), 'Getting help from aid agencies' (7), 'Too much free time' (16), and 'Clothing, shoes and bedding' (26). In Sudan, items were phrased as follows: 'Income and livelihood' (1), 'Being involved in the aid process' (4), 'Law and justice in your community' (5), 'Getting help from aid agencies' (7), 'Separation from family members and friends' (9), 'Too much free time' (16), 'Care for family members' (20), and 'Clothing, shoes and bedding' (26).

[2] This item is listed as phrased during pilot-testing in Gaza and Sudan. In Jordan, the item was divided into three parts: 'Information about the situation in Iraq', Information about aid', and 'Information about your legal rights'.

[3] The items 'Information about aid' and 'Information about your legal rights' were included in Jordan only, as they were incorporated into the items 'Getting help from aid agencies' (7) and 'Law and justice in your community' (5) in Gaza and Sudan (item rankings stated in brackets).

Priority ratings

Table 4.9 shows the priority ratings of individual HESPER items across the three pilot-sites. All items were rated by at least one participant as one of their three most serious problems across the three settings.

In Jordan, the item 'Making a living' was rated by the most participants as one of their three most serious problems (32.5%), more than any other item. This was followed by the items 'Health care' (25.0%), 'Separation from family members' (17.5%), 'Place to live in' (15.0%), and 'Distress' (10.0%).

In Gaza, the items 'Livelihood' and 'Safety' stood out. 52.5% of respondents rated 'Livelihood' as one of their three most serious problems, followed by 'Safety' (47.5%). Other items that were given priority ratings by many participants in Gaza were 'Moving around between places' (20.0%), 'Place to live in' (15.0%), 'Law and justice in your community' (25.0%), 'Too much free time' (20.0%), and 'Health care' (20.0%).

In Sudan, the items 'Food' (38.1%), 'Place to live in' (33.3%), 'Drinking water' (31.0%), 'Education for your children' (31.0%), 'Health care' (23.8%), and 'Income and livelihood' (21.4%) were commonly rated by participants as one of three most serious problems.

Table 4.9 Number of participants (% in brackets) in the three pilot-sites who rated each of the HESPER Scale's items as one of their three most serious problems

HESPER items	Total (n=122)	Jordan (n=40)	Gaza (n=40)	Sudan (n=42)
1. Making a living[1]	43 (35.2%)	13 (32.5%)	21 (52.5%)	9 (21.4%)
2. Health care	27 (22.1%)	9 (22.5%)	8 (20.0%)	10 (23.8%)
3. Place to live in	26 (21.3%)	6 (15.0%)	6 (15.0%)	14 (33.3%)
4. Safety	22 (18.0%)	1 (2.5%)	19 (47.5%)	2 (4.8%)
5. Food	17 (13.9%)	0	1 (2.5%)	16 (38.1%)
6. Drinking water	16 (13.1%)	0	3 (7.5%)	13 (31.0%)
7. Education for your children	15 (12.3%)	0	2 (5.0%)	13 (31.0%)
8. Protection by the law for people in your community[1]	13 (10.7%)	1 (2.5%)	10 (25.0%)	2 (4.8%)
9. Physical health	11 (9.0%)	3 (7.5%)	4 (10.0%)	4 (9.5%)
10. Care for people in your community who are on their own	11 (9.0%)	4 (10.0%)	0	7 (16.7%)
11. Having enough to do during the day[1]	11 (9.0%)	1 (2.5%)	8 (20.0%)	2 (4.8%)
12. Aid being handed out fairly[1]	10 (8.2%)	7 (17.5%)	3 (7.5%)	0
13. Separation from family members[1]	9 (7.4%)	7 (17.5%)	1 (2.5%)	1 (2.4%)
14. Moving around between places	9 (7.4%)	0	8 (20.0%)	1 (2.4%)
15. Toilets	8 (6.6%)	0	1 (2.5%)	7 (16.7%)
16. Distress	6 (4.9%)	4 (10.0%)	2 (5.0%)	0
17. Care for family members in your household[1]	6 (15.0%)	3 (7.5%)	1 (2.5%)	2 (4.8%)
18. Living away from home	6 (4.9%)	5 (12.5%)	0	1 (2.4%)
19. Alcohol use in your community	5 (4.1%)	0	0	5 (11.9%)
20. Mental illness in your community	5 (4.1%)	2 (5.0%)	3 (7.5%)	0
21. Safety and protection from violence for women in your community	5 (4.1%)	0	5 (12.5%)	0
22. Support from others	4 (3.3%)	0	2 (5.0%)	2 (4.8%)
23. Clothing and bedding[1]	4 (3.3%)	0	1 (2.5%)	3 (7.1%)
24. Respect	4 (3.3%)	2 (5.0%)	0	2 (4.8%)

25. Safety and protection for your children	4 (3.3%)	0	3 (7.5%)	1 (2.4%)
26. Information about the crisis situation[2]	4 (3.3%)	4 (10.0%)	0	0
27. Drug use in your community	3 (2.5%)	0	3 (7.5%)	0
28. Having a say in the aid response[1]	3 (2.5%)	1 (2.5%)	2 (5.0%)	0
29. Cooking	3 (2.5%)	0	0	3 (7.1%)
30. Keeping clean	2 (1.6%)	0	1 (2.5%)	1 (2.4%)
31. Religious, cultural or spiritual practices	2 (1.6%)	0	1 (2.5%)	1 (2.4%)
32. Burying and mourning the dead in your community	1 (0.8%)	0	1 (2.5%)	0
Information about aid[3]	N/A	2 (5.0%)	N/A	N/A
Information about your legal rights[3]	N/A	1 (2.5%)	N/A	N/A

Items are listed and ranked in descending order of total priority ratings, taking into account whether items were given a priority rating of 1, 2 or 3.

[1] Item headings are listed as phrased during pilot-testing in Jordan (the first pilot-site). Revisions were made to a few items following this. Item headings were phrased as follows in Gaza (item rankings stated in brackets): 'Livelihood' (1), 'Law and justice in your community' (8), 'Too much free time' (11), 'Getting help from aid agencies' (12), 'Clothing, shoes and bedding' (23), and 'Participation in the aid response' (28). In Sudan, items were phrased as follows: 'Income and livelihood' (1), 'Law and justice in your community' (8), 'Too much free time' (11), 'Getting help from aid agencies' (12), 'Separation from family members and friends' (13), 'Care for family members' (17), 'Clothing, shoes and bedding' (23), and 'Being involved in the aid process' (28).

[2] This item is listed as phrased during pilot-testing in Gaza and Sudan. In Jordan, the item was divided into three parts: 'Information about the situation in Iraq', Information about aid', and 'Information about your legal rights'.

[3] The items 'Information about aid' and 'Information about your legal rights' were included in Jordan only, as they were incorporated into the items 'Getting help from aid agencies' (12) and 'Law and justice in your community' (8) in Gaza and Sudan (item rankings stated in brackets).

Overall rankings of HESPER items

Table 4.10 shows the overall rankings of individual HESPER items according to the average need ratings and priority ratings from pilot-testing of the draft HESPER Scale in Jordan, Gaza and Sudan, as well as the mean ratings from the expert survey in 'Phase 1' of the project (see Section 3.7 and Appendix E1 for further details).

Table 4.10 Overall rankings of individual HESPER items according to the average rankings of need ratings and priority ratings during pilot-testing of the draft HESPER Scale in Jordan, Gaza and Sudan (n=122), and mean ratings by expert survey participants during 'Phase 1' of the project (n=49)

HESPER items	Overall ranking	Need ranking	Priority ranking	Survey ranking[1]
Making a living[2]	1	1	1	6
Health care	2	6	4	N/A[3]
Safety	3	11	3	2
Place to live in	4	13	2	3
Drinking water	5	14	6	1
Distress	6	3	14	8
Separation from family members[2]	7	9	12	9
Food	8	23	5	4
Physical health	9	17	8	7
Care for people in your community who are on their own	10	8	9	15
Living away from home	11	10	18	11
Aid being handed out fairly[2]	12	7	16	16
Toilets	13	24	14	5
Protection by the law for people in your community[2]	14	5	10	28
Care for family members in your household[2]	15	20	16	10
Moving around between places	16	11	12	26
Education for your children	17	29	7	14
Mental illness in your community	18	2	22	27
Having enough to do during the day[2]	19	16	10	29
Support from others	20	15	18	23
Having a say in the aid response[2]	21	4	28	25
Information about the crisis situation[4]	22	25	22	12
Respect	23	20	22	19
Safety and protection from violence for women in your community	24	17	26	21
Keeping clean	25	22	30	13
Clothing and bedding[2]	26	26	20	22
Safety and protection for your children	27	28	22	18
Drug use in your community	28	17	27	30
Alcohol use in your community	29	27	20	31
Cooking	30	30	28	20
Burying and mourning the dead in your community	31	31	30	17
Religious, cultural or spiritual practices	32	32	30	24
Information about aid[5]	N/A	N/A	N/A	N/A
Information about your legal rights[5]	N/A	N/A	N/A	N/A

See next page for foot notes of Table 4.10.

Footnotes for Table 4.10

Items are listed in descending order of overall rankings.

[1] For the expert survey, some rankings are missing from the table, as a few items were either deleted or combined with other items following the survey (see Appendix E1). Some item headings were also reworded following the survey (see Table E8 in Appendix E1 for item headings used during the expert survey).

[2] Item headings are listed as phrased during pilot-testing in Jordan (the first pilot-site). Revisions were made to a few items following this. Item headings were phrased as follows in Gaza (overall item rankings stated in brackets): 'Livelihood' (1), 'Getting help from aid agencies' (12), 'Law and justice in your community' (14), 'Too much free time' (19), 'Participation in the aid response' (21), and 'Clothing, shoes and bedding' (26). In Sudan, items were phrased as follows: 'Income and livelihood' (1), 'Separation from family members and friends' (7), 'Getting help from aid agencies' (12), 'Law and justice in your community' (14), 'Care for family members' (15), 'Too much free time' (19), 'Being involved in the aid process' (21), and 'Clothing, shoes and bedding' (26).

[3] This item ('Health care') was added based on the expert survey.

[4] This item is listed as phrased during pilot-testing in Gaza and Sudan. In Jordan, the item was divided into three parts: 'Information about the situation in Iraq', Information about aid', and 'Information about your legal rights'.

[5] The items 'Information about aid' and 'Information about your legal rights' were included in Jordan only, as they were incorporated into the items 'Getting help from aid agencies' (12) and 'Law and justice in your community' (14) in Gaza and Sudan (overall item rankings stated in brackets).

Additional unmet needs

When asked to name any additional serious problems not already listed on the draft HESPER Scale, in Jordan 29 (72.5%) participants named at least one additional unmet need, six (15.0%) participants in Gaza, and 24 (57.1%) participants in Sudan.

These additional items listed by participants were reorganised so that items which could be assigned to one of the already existing HESPER items were excluded, and any items that covered multiple issues were separated out (i.e. where participants had listed several issues under one item). When the analyses were then re-run, in Jordan 26 (65.0%) participants now listed at least one additional serious problem; three (7.5%) participants in Gaza; and 17 (40.5%) participants in Sudan. The mean number of these additional items listed were 1.5 (SD=1.4) in Jordan (ranging between 0 and 5); 0.08 (SD=0.27) in Gaza (ranging between 0 and 1); and 0.62 (SD=0.91) in Sudan (ranging between 0 and 3). Table 4.11 shows those additional items named by participants across the three pilot-sites which could not be assigned to any of the already existing HESPER items.

Table 4.11 Additional unmet need items listed by at least two participants across the three pilot-sites, together with the number of participants who listed each additional item across settings

Additional unmet need items	Total (n=122)	Jordan (n=40)	Gaza (n=40)	Sudan (n=42)
Residency	10 (8.2%)	10 (25.0%)	0	0
Instability / insecurity / absence of peace	9 (7.4%)	8 (20.0%)	0	2 (4.8%)
Electricity	7 (5.7%)	0	2 (5.0%)	5 (11.9%)
Resettlement	7 (5.7%)	7 (17.5%)	0	0
Uncertainty about the future / hopelessness	6 (4.9%)	6 (15.0%)	0	0
Mosquito nets	5 (4.1%)	0	0	5 (11.9%)
Physical health of family members	2 (1.6%)	2 (5.0%)	0	0
Transport for children to school	2 (1.6%)	0	0	2 (4.8%)
Computer courses	2 (1.6%)	0	0	2 (4.8%)
Too much responsibility	2 (1.6%)	0	0	2 (4.8%)

Items are listed in descending order of total number of participants.

When excluding those additional unmet need items named by participants which could be assigned to one of the already existing HESPER items, and separating out any items that covered multiple issues, in Jordan 21 (52.5%) participants gave at least one of the additional unmet needs listed a priority rating (i.e. rated it as one of their three most serious problems). Table 4.12 shows those additional items which were given priority ratings by participants in Jordan, and could not be assigned to any already existing HESPER items. In Gaza and Sudan, no participants gave any of the additional unmet needs listed a priority rating.

Table 4.12 Additional unmet need items that were given priority ratings (i.e. were rated as one of participants' three most serious problems) by at least two participants during pilot-testing in Jordan, together with the number of participants who gave items a priority rating

Additional items	Jordan (n=40)
Residency	6 (15.0%)
Resettlement	6 (15.0%)
Uncertainty about the future / hopelessness	6 (15.0%)
Instability / insecurity / absence of peace	5 (12.5%)
Physical health of family members	2 (5.0%)

Inter-rater reliability

Intraclass correlation coefficients (ICC) (absolute agreement) for total number of unmet needs on the HESPER Scale were 0.981 across the three pilot-sites; they were 0.951 in Jordan, 0.998 in Gaza, and 0.998 in Sudan.

Table 4.13 shows the inter-rater reliability of need ratings of individual HESPER items in the three pilot-sites. Percentage agreements ranged between 75.0% and 100% across sites, and Cohen's kappas ranged between 0.62 and 1.0 (with 87.8% of HESPER items having kappas of above 0.8).

Table 4.13 Percentage agreements and Cohen's kappas for inter-rater reliability of need ratings of individual HESPER items in the three pilot-sites

	Total (n=58)		Jordan (n=20)		Gaza (n=20)		Sudan (n=18)	
HESPER items	**% agreed**	**Cohen's kappa**	**% agreed**	**Cohen's kappa**	**% agreed**	**Cohen's kappa**	**% agreed**	**Cohen's kappa**
1. Drinking water	98.3	0.96	95.0	0.89	100	1.0	100	1.0
2. Food	94.8	0.89	90.0	0.78	100	1.0	94.4	0.85
3. Cooking	100	1.0	100	1.0	100	1.0	100	1.0
4. Place to live in	98.2	0.96	94.7	0.83	100	1.0	100	1.0
5. Toilets	96.6	0.93	95.0	0.89	95.0	0.88	100	1.0
6. Keeping clean	94.8	0.89	90.0	0.8	95.0	0.77	100	1.0
7. Clothing and bedding[1]	100	1.0	100	1.0	100	1.0	100	1.0
8. Physical health	96.6	0.93	90.0	0.8	100	1.0	100	1.0
9. Health care	100	1.0	100	1.0	100	1.0	100	1.0
10. Making a living[1]	100	1.0	100	1.0	100	1.0	100	1.0
11. Safety	96.6	0.93	90.0	0.78	100	1.0	100	1.0
12. Education for your children	98.3	0.97	95.0	0.92	100	1.0	100	1.0
13. Safety and protection for your children	98.3	0.97	95.0	0.92	100	1.0	100	1.0
14. Safety and protection from violence for women in your community	89.7	0.83	75.0	0.62	95.0	0.78	100	1.0
15. Protection by the law for people in your community[1]	98.3	0.96	95.0	0.91	100	1.0	100	1.0
16. Burying and mourning the dead in your community	96.6	0.93	90.0	0.83	100	1.0	100	1.0
17. Alcohol use in your community	93.1	0.89	85.0	0.73	95.0	0.91	100	1.0
18. Drug use in your community	94.8	0.92	85.0	0.7	100	1.0	100	1.0
19. Mental illness in your community	96.6	0.91	95.0	0.86	100	1.0	94.4	0.9

20. Care for people in your community who are on their own	93.1	0.88	85.0	0.73	100	1.0	94.4	0.9
21. Care for family members in your household[1]	100	1.0	100	1.0	100	1.0	100	1.0
22. Separation from family members[1]	96.6	0.92	90.0	0.69	100	1.0	100	1.0
23. Support from others	98.3	0.97	95.0	0.91	100	1.0	100	1.0
24. Religious, cultural or spiritual practices	98.3	0.95	100	1.0	95.0	0.86	100	1.0
25. Distress	100	1.0	100	1.0	100	1.0	100	1.0
26. Living away from home	96.6	0.94	90.0	0.76	100	1.0	100	1.0
27. Respect	96.6	0.93	95.0	0.91	100	1.0	94.4	0.85
28. Having a say in the aid response[1]	100	1.0	100	1.0	100	1.0	100	1.0
29. (29a) Information about the crisis situation[2]	94.8	0.92	95.0	0.9	95.0	0.88	94.4	0.91
30. Aid being handed out fairly[1]	98.3	0.97	95.0	0.88	100	1.0	100	1.0
31. Moving around between places	96.6	0.93	95.0	0.9	100	1.0	94.4	0.87
32. Having enough to do during the day[1]	100	1.0	95.0	1.0	100	1.0	100	1.0
29b. Information about aid[3]	N/A	N/A	85.0	0.7	N/A	N/A	N/A	N/A
29c. Information about your legal rights[3]	N/A	N/A	90.0	0.82	N/A	N/A	N/A	N/A

Items are listed according to their order on the draft HESPER Scale used during pilot-testing.

[1] Item headings are listed as phrased during pilot-testing in Jordan (the first pilot-site). Revisions were made to a few items following this. Item headings were phrased as follows in Gaza (item numbers stated in brackets): 'Clothing, shoes and bedding' (7), 'Livelihood' (10), 'Law and justice in your community' (15), 'Participation in the aid response' (28), 'Getting help from aid agencies' (30), and 'Too much free time' (32). In Sudan, items were phrased as follows: 'Clothing, shoes and bedding' (7), 'Income and livelihood' (10), 'Law and justice in your community' (15), 'Care for family members' (21), 'Separation from family members and friends' (22), 'Being involved in the aid process' (28), 'Getting help from aid agencies' (30), and 'Too much free time' (32).

[2] This item is listed as phrased during pilot-testing in Gaza and Sudan. In Jordan, the item was divided into three parts: 'Information about the situation in Iraq' (29a), Information about aid' (29b), and 'Information about your legal rights' (29c) (item numbers stated in brackets).

[3] The items 'Information about aid' and 'Information about your legal rights' were included in Jordan only, as they were incorporated into the items 'Getting help from aid agencies' (30) and 'Law and justice in your community' (15) in Gaza and Sudan (item numbers stated in brackets).

Internal consistency

The Cronbach's alpha of individual HESPER items was 0.84 across the three pilot-sites; it was 0.89 in Jordan, 0.75 in Gaza, and 0.88 in Sudan. No two items correlated highly across the three sites (i.e. none had correlations of over 0.6).

Participant survey

Quantitative results

Table 4.14 shows participants' responses to the 'Yes'/'No' statements in the first part of the participant survey for the three pilot-sites. Overall, participants across settings found the draft HESPER Scale to be intelligible, comprehensive, useful, and appropriate. However, around half of participants found the HESPER interview too brief and quick.

Table 4.14 Participants' responses in the first part of the participant survey in the three pilot-sites

Statements in participant survey	Total (n=122)	Jordan (n=40)	Gaza (n=40)	Sudan (n=42)
The language in the interview was easy to understand.				
Yes	120 (98.4%)	39 (97.5%)	40 (100%)	41 (97.6%)
No	2 (1.6%)	1 (2.5%)	0	1 (2.4%)
The interview covered most of your serious problems sufficiently.				
Yes	112 (91.8%)	39 (97.5%)	32 (80.0%)	41 (97.6%)
No	10 (8.2%)	1 (2.5%)	8 (20.0%)	1 (2.4%)
It was difficult giving answers in the interview.				
Yes	18 (14.8%)	3 (7.5%)	3 (7.5%)	12 (28.6%)
No	104 (85.3%)	37 (92.5%)	37 (92.5%)	30 (71.4%)
The interview is useful for assessing the problems of a person.				
Yes	114 (93.4%)	38 (95.0%)	34 (85.0%)	42 (100%)
No	8 (6.6%)	2 (5.0%)	6 (15.0%)	0
The interview is too long.				
Yes	5 (4.1%)	1 (2.5%)	1 (2.5%)	3 (7.1%)
No	116 (95.1%)	39 (97.5%)	39 (97.5%)	38 (90.5%)
The interview is too short.				
Yes	61 (50.0%)	27 (67.5%)	7 (17.5%)	27 (64.3%)
No	50 (41.0%)	9 (22.5%)	33 (82.5%)	8 (19.0%)
Undecided[1]	4 (3.3%)	4 (10.0%)	0	0
The interview went too fast.				
Yes	54 (44.3%)	11 (27.5%)	22 (55.0%)	21 (50.0%)
No	67 (54.9%)	29 (72.5%)	18 (45.0%)	20 (47.6%)
I did not like being interviewed.				
Yes	11 (9.0%)	3 (7.5%)	1 (2.5%)	7 (16.7%)
No	106 (86.9%)	37 (92.5%)	39 (97.5%)	30 (71.4%)
At times I did not feel comfortable during the interview.				
Yes	16 (13.1%)	2 (5.0%)	4 (10.0%)	10 (23.8%)
No	96 (78.7%)	28 (70.0%)	36 (90.0%)	32 (76.2%)
Some of the questions were too personal.				
Yes	32 (26.2%)	4 (10.0%)	3 (7.5%)	25 (59.5%)
No	75 (61.5%)	26 (65.0%)	37 (92.5%)	12 (28.6%)

Numbers do not always add up to total number of participants due to missing data.
[1] A few participants rated this item as 'undecided' in Jordan, even though it was not listed as a response option.

Free-text results

Length of HESPER Scale

When participants in Gaza and Sudan were asked about the ideal length for a HESPER interview (the question was not included in Jordan), views were mixed. Whilst most of the participants in Gaza (82.5%), and almost half of the participants who responded to the question in Sudan (46.4%), found the current length to be acceptable, several participants (28.6% of participants who responded in Sudan, and 12.5% in Gaza) thought the interview should be longer (for example by adding more questions or making questions more detailed), and several others (25.0% of participants who responded in Sudan, and 5.0% in Gaza) felt that it should be shorter (for instance by including a maximum of 25 or 30 items, or removing irrelevant items).

Intelligibility of HESPER Scale

In terms of the intelligibility of HESPER items, the majority of participants in all three pilot-sites (95.0% of participants in Gaza, 92.5% in Jordan, and 83.3% of those who responded in Sudan), commented that all questions were easy to understand. The remaining participants in Sudan (16.7%) found at least one of the HESPER questions difficult to understand, for example the item 'Too much free time'. In Gaza, a participant suggested simplifying the HESPER questions for less educated people, even though s/he had no difficulty in understanding the questions; another participant recommended explaining some questions in more detail.

Recommendations

When asked to point out any problems or make suggestions for improving either the draft HESPER Scale or interview process, the majority of participants (80.0% participants in Gaza, 64.3% in Sudan, and 62.5% in Jordan) did not have any suggestions or comments. On the contrary, several participants (22.5% in Jordan, 7.1% in Sudan, and 2.5% in Gaza) reflected positively on the HESPER interview overall, commenting that the assessment was useful and comprehensive, was an

interesting experience, and in the Jordan sample that interviewers were professional, knowledgeable, easy to understand and friendly.

In regards to the draft HESPER Scale, several participants (7.5% in Jordan and Gaza each, and 4.8% in Sudan) proposed adding missing items; in Gaza items relating to the security situation, law and justice, and rising prices and borders were specifically mentioned, and in Sudan roads and sanitation. Other suggestions included merging HESPER items together, and simplifying the HESPER Scale's language (both in Gaza).

In regards to the research procedures, suggestions included compensating participants for their time with money or food (Sudan); carrying out the interview in the more damaged or challenging local areas (Gaza); interviewing a larger sample (Jordan and Gaza); using a random and different sample (Gaza); or conducting interviews in standard Arabic (Sudan). A few participants in Sudan and Jordan also responded that they hoped the assessment would lead to positive results and to more support by NGOs, whilst another participant in Sudan commented that affected people's opinions should always be sought in interviews.

Participant focus groups

Table 4.15 in part displays participants' responses during the 12 focus group discussions across the three pilot-sites (four focus groups per site) to questions about the intelligibility, relevance, cultural acceptability, and suitability of each of the HESPER items.

Table 4.16 on pages 151 to 152 shows an overview of missing items that focus group participants suggested for inclusion into the HESPER Scale. The only item which was named by focus group participants at two sites was 'Electricity' (Gaza and Sudan). No item was listed by participants in all three sites.

Table 4.15 Suggestions for changes, and other comments, that were made for HESPER items during participant focus groups, interviewer surveys and interviewer feedback sessions in the three pilot-sites

HESPER items[1]	**Participant feedback (focus groups)**	**Interviewer feedback (interviewer survey / feedback sessions)** (item numbers in brackets)
1. Drinking water	Such basic items are not as relevant as moral support in this setting (Jordan, one group). More detail should be included (Gaza, older women). Include more about the sources of water, i.e. municipal water or health water, to make it less ambiguous (Gaza, older men).	---
2. Food	Make the question more specific (Jordan, both men). People may not feel comfortable answering this question, or will not answer honestly, due to shame and embarrassment (Gaza and Sudan, three groups each). In Sudan this may be due to cultural norms of food not being talked about in public.	Combine this item with 'Cooking' (3) (Sudan).
3. Cooking	Some people may not feel comfortable answering this question, as it is personal and s/he may feel humiliated, ashamed, embarrassed, or sad (Jordan, younger men; Gaza, all four groups). Divide the question into two parts: Gas and fuel for cooking; cooking tools (Gaza, younger men). Some men would not be able to answer this question, as the question is for women (Sudan, one male group).	Combine this item with 'Food' (2) (Sudan).
4. Place to live in	Some people may feel sad answering this question, especially if they had a high standard of living previously (Jordan, older women). Some people may refuse to answer this question, if s/he is a beneficiary of the current situation (Gaza, older men).	---

5.	Toilets	Ask this question only to people living in camps, as it is not that relevant to others (Jordan, older men). Phrase the question as 'Do you have access to a bathroom in your house or not?' (Jordan, younger men). Some people may not find this an interesting question (Jordan, younger men). Some people may feel embarrassed or ashamed to answer honestly, as it is a private question (Jordan, older men; Gaza, all four groups). Some people may have difficulties understanding the question, as it is ambiguous and unclear, i.e. whether it refers to private or public facilities (Gaza, both male groups).	---
6.	Keeping clean	Some people may feel uncomfortable or may not be honest answering this question, as they consider it a private and sensitive question, and may feel embarrassed or ashamed (Jordan, older men and younger women; Gaza, both female groups).	Had some difficulties making ratings for this item, as they felt uncomfortable asking this (Gaza).
7.	Clothing and bedding[2]	Add mattresses and pillows to this item (Jordan, older women). Some people may not feel comfortable answering honestly, as they may be ashamed and it is a private issue (Jordan, younger women and younger men; Gaza, older women; Sudan, one female group).	---
8.	Physical health	Ask whether people have many physical problems rather than specifying it as one problem (Jordan, older women). People with psychological problems may feel uncomfortable answering this question, as many physical illnesses are caused by stress (Jordan, older men). Define and clarify the question more (Jordan, younger men; Gaza, older men). In Gaza it was suggested to divide the item into two: First 'Do you have a health problem because of the current situation?' Second 'Do you suffer from a serious illness or injury?'. Some people may feel uncomfortable answering the question (Sudan, one female group).	Should include family members too because often participants are responsible for the health of family members, and their health may impact on the participant. However, it should be clearly separated from 'Caring for family members' (21) (Jordan). Combine this item with 'Health care' (9) (Sudan).

9.	Health care	Some people may not answer this honestly, as some people receive free medications from humanitarian agencies and then sell them (Jordan, older women). Explain the meaning of health services, to make the item more comprehensive (Gaza, older men). Some people may feel uncomfortable answering this question honestly, either those with mental problems may not answer honestly (Jordan: older men), those who suffer from certain diseases (Gaza: older men), or those who are uneducated (Sudan: one male, one female group).	Combine this item with 'Physical Health' (8) (Sudan).
10.	Making a living[2]	Some people may feel uncomfortable and be dishonest answering this question, as they feel humiliated and ashamed (Jordan, three groups; Sudan, one female group). Some people may not be honest answering this question, to get help from organisations (Gaza, older women).	---
11.	Safety	This item is very general and unclear, and should be made more specific (Jordan, all four groups; Gaza, older men). Some people may be scared or will not feel comfortable answering this question honestly, as it is partly a political question (Jordan, three groups; Gaza, all four groups; Sudan, three groups). Divide the question into two parts: 'Safety related to the political situation', and 'Safety related to crimes' (Gaza, older women). Divide the item into 'External/internal security (status of occupation and local authority)', and 'Social security' (Gaza, older men).	This item is ambiguous, and many participants asked for the interviewer to elaborate (Jordan). Combine this item with 'Safety and Protection for your children' (13) (Sudan).
12.	Education for your children	Add a question about bullying and abuse at schools (Jordan, both female groups). Divide this item into elementary/secondary school, and University (Jordan, older men). Rephrase the question as 'Are your children able to be enrolled in schools?' (Jordan, younger men). Some people may not feel comfortable answering this question, or may find it difficult answering the question, if they do not understand the importance of education (Sudan, three groups).	---

13.	Safety and protection for your children	Some people may not feel comfortable answering this question, if they have for instance lost their children (Gaza, older women). The question should be divided into two parts: 'Is your child safe on the street and in society?', and 'Does your child have the right place to play?' (Gaza, older men). The item is not relevant to this setting (Sudan, one male group). Some people may not feel comfortable answering this question honestly, as it is a political issue (Sudan: one male, one female group).	Combine this item with 'Safety' (11) (Sudan).
14.	Safety and protection from violence for women in your community	Some people may find it difficult answering this question honestly, especially women (due to fear or shame; in Sudan if somebody has not witnessed violence), but also men (due to feeling humiliated) (Jordan, all four groups; Gaza, all four groups; Sudan, one female group). Divide this item into two parts, at home and outside the house (Jordan, older men). Divide the item into two parts, 'Physical violence against women', and 'Sexual assault and sexual harassment of women in our society' (Gaza, older men). This item is not relevant, as women are respected in their culture; it therefore may be difficult answering the question (Sudan, three groups).	Participants may not respond honestly to this item; possibly only ask women this (Jordan).
15.	Protection by the law for people in your community[2]	People may be scared to answer this item honestly (Jordan, three groups; Gaza, all four groups; Sudan, one female group). Divide the item into three sections: 'Do you feel justice?', 'Does the law apply?', 'Do people know their rights and duties?' (Gaza, older men).	This item is ambiguous; several participants asked for interviewer to repeat and/or explain this further (Jordan).
16.	Burying and mourning the dead in your community	The question is delicate, and some people therefore may not feel comfortable answering this (Jordan, older men). Combine this item with 'Religious, cultural and spiritual practices' (24) (Jordan, older men). Do not ask this question, as people will not feel comfortable answering and will not be honest (Jordan, younger men). Some people may not feel comfortable answering this item, as it is against their culture to talk about the dead (Sudan: one male, one female group).	Include this item under 'Religious, cultural or spiritual practices' (24) (Jordan).

17.	Alcohol use in your community	Alcoholics may not answer this question honestly, due to shame, embarrassment or denial (Jordan, all four groups; Gaza: older women, older men; Sudan, one male group). This is not an important or relevant issue in their culture (Jordan, both male groups; Gaza, all four groups). People may not feel comfortable answering this question, and may not answer honestly, as drinking is common in their culture and people may not want to be asked about it (Sudan: one male, one female group).	Had some difficulties rating this item, as it is not locally relevant (Gaza). Combine this item with 'Drug use in your community' (18) (Sudan).
18.	Drug use in your community	People who take drugs may not feel comfortable answering this question (Jordan, three groups; Gaza, three groups). This item is connected to alcohol (Jordan, younger men). People will feel comfortable talking about prescription drugs, but not illegal drugs (Gaza, older women). Clarify whether this includes prescription drugs (Gaza, older men). This item is not relevant to this setting, which may make it difficult answering the question (Sudan, three groups). Some people may not feel comfortable answering this question (Sudan, one female group).	Combine this item with 'Alcohol use in your community' (17) (Sudan).
19.	Mental illness in your community	Phrase this as 'spiritual' instead (Jordan, younger men). Some people, for instance those with a mental health problem, will not feel comfortable answering this question, for example because of stigma, shame and embarrassment (Jordan, younger men; Gaza, all four groups). Some people may not understand this item (Gaza, older women).	---
20.	Care for people in your community who are on their own	Include disabled people (Jordan, older men). The question is too long (Jordan, younger men; Gaza, younger women). Divide the item into: Children, widows, elderly people, and people with health problems (Gaza, older women. Some people may not feel comfortable answering this question, as it is private (Gaza, both female groups). The item should be made more specific (Gaza, younger men).	Combine this item with 'Care for family members' (21) (Sudan).

21. Care for family members in your household[2]	Some people may not answer honestly, because they are afraid or ashamed to answer (Jordan: older women, older men; Gaza: younger men, younger women; Sudan, one male group). Make the question briefer (Jordan, younger men). Divide the item into four parts: children, elderly, disabled, and sick (Gaza, younger women).	Combine this item with 'Separation from family members and friends' (22) (Sudan). Combine this item with 'Care for people in your community who are on their own' (20) (Sudan).
22. Separation from family members[2]	People who suffer will find it difficult answering this question (Gaza, younger women).	Specify whether this refers to family in Jordan or Iraq (Jordan). Combine this item with 'Living away from home' (26) (Sudan). Combine this item with 'Moving around between places' (31) (Sudan). Combine this item with 'Care for family members' (21) (Sudan).
23. Support from others	People may not be honest on this, for instance if they are receiving financial help, as they do not want their aid to be reduced, or if they are ashamed to be getting help (Jordan, three groups; Gaza: older women, older men). The item is not very clear; it needs explaining more with examples of support (Jordan, younger men; Gaza (older men, younger women). Divide the item into 'practical support' and 'spiritual support' (Jordan, younger men).	Combine this item with 'Getting help from aid agencies' (30) (Sudan).

24.	Religious, cultural or spiritual practices	Some people may not answer this honestly, due to fear (Jordan, three groups; Gaza: older men, younger women). Combine this item with 'Burying and mourning the dead in your community' (16) (Jordan, older men).	Include this item under 'Burying and mourning the dead in your community' (16) (Jordan). Had some difficulties making ratings for this item, as it is related to the political situation (Gaza).
25.	Distress	This item is unclear; it needs to be more specific and ask about the causes for the distress (Jordan, older women). Remove the word 'sad' from the item question (Jordan, younger men). Some people may not answer honestly, so as to not reveal their personality and problems (Sudan: one male, one female group); or may not feel comfortable answering (Sudan, female group).	---
26.	Living away from home	This item is unclear and should be more definite; it should include 'home in your country', defining 'home' (Jordan, three groups; Gaza, both female groups). Combine this item with 'Support from others' (23) (Gaza, younger men). Those not living away from home may see the item as a waste of time (Sudan, one male group).	Combine this item with 'Moving around between places' (31) (Sudan). Combine this item with 'Separation from family members and friends' (22) (Sudan).

27. Respect	Divide this item into: Present situation in the Jordanian community. Then aid received, to evaluate it and to say what is missing. And thirdly, related to the Iraqi community (Jordan, older men). People may feel ashamed to answer this honestly (Gaza, older women). Rephrase as: 'Do you feel disrespected from the persons or associations that support you?' (Gaza, younger men). Some people may not feel comfortable answering this question, if they do not know what respect is about (Sudan, one female group).	---
28. Having a say in the aid response[2]	Some people may not feel comfortable answering this, or may not understand the question (Jordan, younger men). The question needs to be simplified to make it more understandable (Gaza, younger men). Some people may not answer this, or may not feel comfortable answering the question honestly, for example as research by NGOs is often not implemented (Sudan: one male, one female group).	A sub-item should be added, asking participants whether they are receiving any aid before generalizing it to the wider population (Jordan). Combine this item with 'Getting help from aid agencies' (30) (Sudan).
29. Information about the crisis situation[3]	Some people may not answer this honestly, due to fear (Jordan: older women, younger men). This item is not that relevant or important (which also makes it unclear), and should be deleted (Jordan, both male groups; Gaza, three groups). This item is not relevant to everybody, i.e. those living in their home country (Sudan, one male group).	Had some difficulties making ratings for this item, as it is not locally relevant (Gaza).
30. Aid being handed out fairly[2]	Include the name of the aid organisation, to make the question more understandable (Jordan, older women). Make this item more specialised by rephrasing as: 'Do you have information about the associations which provide help?' (Gaza, younger men). Some people will not feel comfortable answering this question, as no action may be taken (Sudan, one male group).	Combine this item with 'Being involved in the aid process' (28) (Sudan). Combine this item with 'Support from others' (23) (Sudan).

31. Moving around between places	This item should be more definite (Jordan, older men). Differentiate between moving internally and externally (Gaza, both male groups).	Combine this item with 'Living away from home' (26) (Sudan). Combine this item with 'Separation from family members and friends' (22) (Sudan).
32. Having enough to do during the day[2]	Some people may be afraid to answer this, for instance if working illegally (Jordan, both female groups). Divide the item into two parts: 'Do you have too much free time?, and 'How do you spend this time?' (Gaza, older men)	---
29b Information about aid[4] (Jordan only)	---	Combine this with the other questions on aid (Jordan). Include information on whether the participant is receiving aid (Jordan).
29c Information about your legal rights[4] (Jordan only)	---	This item is ambiguous; several participants asked for the interviewer to repeat and/or explain the question further (Jordan). Combine this item with 'Protection by the law for people in your community' (15) (Jordan).

See next page for footnotes of Table 4.15.

Footnotes for Table 4.15

As responses were generally positive for all HESPER items, listed are for participant focus groups only those responses that went beyond stating that the item was intelligible, relevant, culturally applicable and suitable; and for interviewer feedback only any changes that were suggested.

Items are listed according to the order in which they appeared in the draft HESPER Scale used during pilot-testing.

[1] See Appendix A2 for item questions.

[2] Item headings are listed as phrased during pilot-testing in Jordan (the first pilot-site). Revisions were made to a few items following this. Item headings were phrased as follows in Gaza (item numbers stated in brackets): 'Clothing, shoes and bedding' (7), 'Livelihood' (10), 'Law and justice in your community' (15), 'Participation in the aid response' (28), 'Getting help from aid agencies' (30), and 'Too much free time' (32). In Sudan, items were phrased as follows: 'Clothing, shoes and bedding' (7), 'Income and livelihood' (10), 'Law and justice in your community' (15), 'Care for family members' (21), 'Separation from family members and friends' (22), 'Being involved in the aid process' (28), 'Getting help from aid agencies' (30), and 'Too much free time' (32).

[3] This item is listed as phrased during pilot-testing in Gaza and Sudan. In Jordan, the item was divided into three parts: 'Information about the situation in Iraq' (29a), Information about aid' (29b), and 'Information about your legal rights' (29c) (item numbers stated in brackets).

[4] The items 'Information about aid' and 'Information about your legal rights' were included in Jordan only, as they were incorporated into the items 'Getting help from aid agencies' (30) and 'Law and justice in your community' (15) in Gaza and Sudan (item numbers stated in brackets).

Table 4.16 Items that were proposed to be added to the HESPER Scale by focus group participants in the three pilot-sites

Categories of missing items	Missing items proposed in Jordan	Missing items proposed in Gaza	Missing items proposed in Sudan
Financial/material problems	Material issues/living standards (older women; financial support (older women); ability to provide food for family (older women)	Unemployment (all four groups); rising/high prices (three groups); economic problems (both female groups); youth problems, including unemployment (older men)	---
Cultural/social problems	---	Early marriage: Gaza (three groups); social relations (older men); marriage and high cost of dowries (older men); spinsterhood (older women); culture of the community (younger women); credibility of media (younger men); sport (younger men)	---
Political problems	Residency/citizenship permit (three groups)	Blockade/border crossing /travel abroad (older men and women); political problems/separation between Gaza and West Bank (older women); democracy (younger men); reconciliation between Fatah and Hamas (younger women); rights of disabled people (younger men)	---

Problems concerned with children	Ability to send children to school (older women); public parks for children (older women); concerns about children's future (younger men); more focus on children, for instance them being secure (younger men)	---	Caring for street children (one female group)
Problems related to infrastructure	---	**Electricity** (three groups); external transportation (younger men); sanitation (older men)	Roads (both female groups); **electricity** (one female group)
Problems related to support organizations	UN/UNHCR (older men); rights as refugees and responsibility of support organisations (older men); satisfaction with support from organisations (older men)	---	---
Health care problems	More focus on medical issues (older men); satisfaction in receiving health care (older men)	---	---
Other problems	Concerns about future (younger men)	Migration (younger men); environmental pollution (older men)	---

Items that were proposed by participants in more than one of the pilot-sites are highlighted in bold font.

Interviewer survey and feedback sessions

Quantitative results

Table 4.17 shows interviewers' responses in the first part of the interviewer survey across the three pilot-sites. Overall, across the three settings interviewers found the draft HESPER Scale and interviewers' training manual to be intelligible, easy to use, useful, and of a suitable length.

Table 4.17 Interviewers' responses in the first part of the interviewer survey across the three pilot-sites

Statements in interviewer survey	Total (n=15)	Jordan (n=4)	Gaza (n=4)	Sudan (n=7)
The language in the training manual was easy to understand.				
Yes	15 (100%)	4 (100%)	4 (100%)	7 (100%)
No	0	0	0	0
The training manual is too long.				
Yes	4 (26.7%)	2 (50.0%)	0	2 (28.6%)
No	11 (73.3%)	2 (50.0%)	4 (100%)	5 (71.4%)
The training manual is too short.				
Yes	2 (13.3%)	0	0	2 (28.6%)
No	12 (80.0%)	4 (100%)	4 (100%)	4 (57.1%)
The guidelines and instructions in the training manual on how to use the HESPER were difficult to understand.				
Yes	1 (6.7%)	0	0	1 (14.3%)
No	14 (93.3%)	4 (100%)	4 (100%)	6 (85.7%)
The training manual was helpful in understanding how to use the HESPER.				
Yes	14 (93.3%)	3 (75.0%)	4 (100%)	7 (100%)
No	1 (6.7%)	1 (25.0%)	0	0
The rating instructions for the HESPER were difficult to understand, even after reading the training manual.				
Yes	1 (6.7%)	0	0	1 (14.3%)
No	14 (93.3%)	4 (100%)	4 (100%)	6 (85.7%)
The language used in the HESPER was difficult to understand.				
Yes	1 (6.7%)	0	0	1 (14.3%)
No	14 (93.3%)	4 (100%)	4 (100%)	6 (85.7%)

I understood what the HESPER was assessing.				
Yes	15 (100%)	4 (100%)	4 (100%)	7 (100%)
No	0	0	0	0
It was difficult to rate people using the HESPER.				
Yes	4 (26.7%)	1 (25.0%)	0	3 (42.9%)
No	11 (73.3%)	3 (75.0%)	4 (100%)	4 (57.1%)
I feel confident using the HESPER.				
Yes	14 (93.3%)	3 (75.0%)	4 (100%)	7 (100%)
No	1 (6.7%)	1 (25.0%)	0	0
The HESPER is useful for assessing the needs of a person.				
Yes	14 (93.3%)	3 (75.0%)	4 (100%)	7 (100%)
No	1 (6.7%)	1 (25.0%)	0	0
The HESPER is too long.				
Yes	5 (33.3%)	0	0	5 (71.4%)
No	10 (66.7%)	4 (100%)	4 (100%)	2 (28.6%)
The HESPER is too short.				
Yes	4 (26.7%)	3 (75.0%)	0	1 (14.3%)
No	11 (73.3%)	1 (25.0%)	4 (100%)	6 (85.7%)

Numbers do not always add up to total number of interviewers due to missing data.

Free-text results

HESPER Scale

Interviewers across the three pilot-sites generally reflected positively on the draft HESPER Scale. Whilst interviewers in Jordan commented that they found it easy to conduct the interviews, and that the draft HESPER Scale was well developed and easy to use, in Gaza interviewers remarked that they had no problems explaining HESPER questions, and that participants found the questions clear and understandable. Interviewers in Sudan also responded that the draft HESPER Scale was useful, that all items were relevant, appropriate and intelligible for the local context, and that participants seemed to understand and answer all questions appropriately without any problems. Furthermore, the majority of interviewers in the three sites (75.0% in Jordan, 50.0% in Gaza, and 57.1% in Sudan) reported that they did not have any difficulties rating any of the HESPER items.

When interviewers in Gaza and Sudan were asked about the ideal length of HESPER interviews (the question was not included in the interviewer survey in Jordan), 75.0% of interviewers in Gaza, and half of the interviewers who responded in Sudan, found the length to be acceptable. However, the other half of interviewers in Sudan suggested shortening the HESPER Scale to between 15 and 30 minutes in length, or to around 20 questions. They recommended doing so by combining several of its items, or summarising item questions, rather than removing items.

Several further recommendations were made by interviewers across the three pilot-sites for improvements to the draft HESPER Scale. Proposed changes to particular HESPER items are displayed in Table 4.15 on pages 141 to 150. These included deleting, combining, broadening or rephrasing items, to make them more relevant to the local context and to decrease the interview time. Additionally, items that were suggested to be missing from the draft HESPER Scale consisted of ones relating to the bullying of Iraqi children in schools, and

the sexual harassment and violence towards children in society (Jordan); those connected to damages, the economic and security situation, youth problems and coping with the current situation, with more focus on mental health problems, as "many of the people in Gaza are suffering from mental illness after the last war" (Gaza); as well as ones relating to electricity, the lack of housing, road construction and mosquito nets (Sudan).

Other recommendations that were made by interviewers included reorganising the order of HESPER items so that community-based items were listed at the end of the scale rather than in the middle to simplify the scale for participants and to "maintain participants' flow of thought" (Jordan); rephrasing, clarifying or linguistically simplifying items (Gaza), in particular those relating to legal issues (Jordan); separating and adding more detail to a few items (Jordan); and for those items with sub-items rating sub-items separately in addition to making an overall rating for the item (Jordan). An interviewer in Jordan remarked that

> "merging more than one idea or problem in the same question caused difficulties for the interviewer to explain, and the participant to understand."

Moreover, interviewers in Jordan and Gaza commented that participants may not always respond honestly to some questions, for example sensitive items such as 'Safety and protection from violence for women in your community' (see Table 4.15).

Interviewers' training manual

Interviewers in all three pilot-sites reflected very positively on the interviewers' training manual overall, with the majority of interviewers (50.0% in Jordan, all interviewers in Gaza, and 57.1% in Sudan) commenting that it was very useful and helpful. The practice section (Gaza) and examples given in the manual (Sudan) were thought to be particularly valuable by interviewers, as they felt that these sections clarified the HESPER Scale's rating system and interview process for them.

However, a few recommendations were made by interviewers to improve the interviewers' training manual. These included shortening the manual by summarising it and reducing repetitions (Jordan and Sudan), in particular in regards to the HESPER Scale's rating system (Jordan); as well as lengthening the manual and making it more intensive (Sudan); explaining each of the HESPER Scale's items with examples and practice questions in the manual (Gaza); and translating the manual into Arabic (Gaza).

Research procedures

Interviewers in the three pilot-sites experienced no major difficulties with the research procedures. Interviewers in Sudan commented that participants seemed interested, were willing to take part in the study, and were welcoming towards them. All apart from one interviewer in Sudan reported no difficulties recruiting participants.

However, the one area with which interviewers in Sudan experienced some problems was in the implementation of the focus group discussions. Problems that were mentioned by interviewers included that focus groups were challenging to facilitate; that it was difficult gathering participants together for focus groups; that focus group participants were not sufficiently motivated; that the discussions were too lengthy due to the many questions included in the discussion guide; and that the discussion questions were difficult for participants to understand. Furthermore, as focus groups were conducted in public places (due to resource constraints), there were some interruptions from members of the local population.

Recommendations that were made by interviewers to improve the research procedures included compensating participants with monetary payments, as payments or other incentives had been requested by several participants (Sudan); increasing the time between the training session and interviews (around

two days) to give interviewers more time to familiarise themselves with the interview process and practice interviews (Jordan) (this was indeed done in Gaza as a result; see pages 109 to 110); and interviewing participants from all areas in Gaza, not just Gaza City (Gaza).

Expert survey with members of HESPER project group (free-text data)

Number of HESPER items

When invited to express their view on the ideal number of items for the HESPER Scale, around a third (30.0%) of the expert survey participants found the current number of 32 items to be acceptable. One participant commented:

> "…you do need most of them, because if you do not ask specifically about some of them, people may not think about them or asking the question may be just enough for them to answer whereas otherwise people may feel shy or embarrassed to raise the issue themselves."

However, several participants suggested shortening the HESPER Scale to between 20 and 25 items (30% of participants), or to halve the number of items to 16 (one participant). One participant commented that the ideal length of the scale depended on its purpose, as well as on limitations regarding the length of the scale and the time available. Other suggestions that were made included that the items should cover the domains of the IASC's *Guidelines on mental health and psychosocial support in emergency settings* [1] (which the participant felt the current HESPER version did successfully); linking the list of items to the Sphere Handbook [85, 86]; or only including those relating to psychosocial needs.

When asked what number of items was considered too few for the HESPER Scale, figures of between five and 15 items were mentioned by survey participants (30.0%). A further participant considered no length too short. Two participants commented that the number of items was dependent on the type and variety of the items; one of them remarked:

> "The limit of the minimum domains is decided upon by the variety of the domains. Finding the optimal balance between the depth and

scope of information required and the practical use of the tool is the challenge."

Similarly, two other participants responded that the ideal number of items varied depending on the context within which the scale was being used; they commented that:

> "Concepts used in the questionnaire, ability to generalize and oversee the situation differs largely among populations: too short does not allow for proper thinking, too long results in concentration loss. Numbers of domains can be adapted according to circumstances."

and that:

> "The desirable is to use the full scale, but every context is different and it might happen that only the first domains can be used...But what I would try to avoid is to recommend some domains as more important than others, or suggesting that they are in the scale in order of importance."

Time to administer HESPER Scale

When asked what length of administration time was considered too long for the HESPER Scale, in terms of using it in the field, expert survey participants' responses ranged between 15 and 60 minutes; the mean for the six participants who named a definite figure in response to the question was 36.67 (SD=7.67) minutes. Other suggestions that were made by participants were for the length of the HESPER Scale to be limited to between 15 and 20 minutes (depending on the setting, training resources and education levels); for interviews to take 20 minutes plus another ten minutes "to phase in and phase out"; or to be around half as long as the current version. A further participant commented:

> "Do not have an answer. The point is not time but how do you create the conditions for the interview. If it is in the middle of a street when the person is doing their task...five minutes, if you arrange a household survey (tent, shelter or whatever it is) it can take half an hour or even more without problems..."

When asked to choose between a shorter 15-minute and a more comprehensive 30-minute humanitarian needs assessment scale, 54.5% of expert participants chose the longer scale (though one of them remarked that 25 minutes would be preferable to 30 minutes), and 30.0% selected the shorter scale. The main reasons given for preferring a longer scale related to the time and effort invested in interviewing people; participants commented:

> "Undoubtedly the 30 minutes scale. Once you do the effort of sampling, recruiting and training interviewers and collecting data... better trying to get the full information."

and: "if you are going to trouble people do it properly".

Two participants stated that their choice would depend on the goal or purpose of the assessment; they commented:

> "It depends on the purpose of the needs assessment. If you are talking about a screening tool without prior investigation and which is to be followed up by further investigation for those who screen it, I would go for an instrument that covers multiple domains albeit briefly. If this is your only shot at assessment I would choose fewer domains and investigate them more thoroughly."

and:

> "Depends on the goal of the assessment and acuteness of emergency. If I wanted an overview of needs in acute phase, and was assessing other aspects of the humanitarian situation as well, I would go for the 15 minute scale. If I wanted a more comprehensive overview when there was less of a sense of urgency I might opt for a 30 minute scale, even though I think that is quite an investment compared to an open question to a few key informants."

Several expert participants (27.3%) suggested either having a longer and shorter version of the scale for use in different contexts (such as chronic versus acute situations) and according to the time available; or adopting a menu approach in which "any agency can make up their own mind how much they can/are willing to invest in the tool". Maslow's hierarchy of needs [32] (see Section 2.3.2 for

further details) was proposed as possible guide “to reduce to a 'minimal' list, and a second larger 'desirable if more time' list”.

4.4.4 Revisions to draft HESPER Scale

Based on the results from pilot-testing of the draft HESPER Scale in Jordan, Gaza and Sudan (including need ratings and priority ratings, and their rankings, the participant and interviewer surveys, participant focus groups, interviewer feedback sessions, and research experiences in the field), as well as the expert survey with members of the HESPER project group, the draft HESPER Scale was revised into a version for field-testing (see Appendix A3 for the version used during field-testing). During this process, the author proposed revisions to the draft scale to the HESPER project’s steering committee, who then either approved or rejected the changes. The HESPER Scale’s accompanying interviewers’ training manual was also refined by the author with input from members of the steering committee.

Table 4.18 on page 164 shows an overview of the changes that were made to individual HESPER items. Overall, the draft HESPER Scale was shortened by reducing it from 32 to 26 items. This was based on feedback from several participants in the expert survey, as well as from interviewers in Sudan, and some of the participants in Gaza and Sudan, who all favoured a shortened scale (see ‘Free-text results’ of participant, interviewer and expert surveys). Even though half of participants across the three pilot-sites felt that the HESPER interview was too short (see Table 4.14 on page 138), it is likely that this was due to the overall type of assessment (i.e. the HESPER Scale aims to provide rapid instead of in-depth assessment) rather than the number of items, as almost half of participants also considered the interview too fast (see Table 4.14). A further reason for shortening the scale was that even though the average time taken to administer the scale to participants across the three pilot-sites was in keeping with the aims and criteria of the scale (i.e. between 15 and 30 minutes; see

Section 3.2), in Sudan the average administration time exceeded the maximum desired time limit.

To reduce the number of items in the HESPER Scale, items were either removed from the draft scale, or were merged together (see Table 4.18). For example, the items 'Alcohol use in your community' and 'Drug use in your community' were combined into one item based on the suggestion by both interviewers in Sudan and focus group participants in Jordan (see Table 4.15 on page 145). The items 'Burying and mourning the dead in your community' and 'Religious, cultural and spiritual practices' were the only two items that were removed from the scale, as they ranked lowest on the combined rankings of need ratings and priority ratings collected during pilot-testing, as well as the mean ratings from the expert survey in 'Phase 1' of the project (see Table 4.10 on page 130). The suggestion by interviewers and focus group participants in Jordan (see Table 4.15 on pages 144 and 147) to include these two items as combined item was rejected, since even when the ranking analyses were re-run with the two items included as combined item, the item still ranked lowest out of all 32 items.

Other changes that were made to HESPER items based on feedback from interviewers and participants during pilot-testing of the draft HESPER Scale (see Table 4.15) included that several item questions were rephrased in simpler language to make them more intelligible for participants, or that they were expanded to include more sub-items. For instance, the item question for 'Safety' was broadened to include instability, insecurity and an absence of peace, as these sub-items were named as additional unmet needs by at least two participants each in two of the three pilot-sites (Jordan and Sudan) (see Table 4.11 on page 133), and 12.5% of participants in Jordan rated them as one of their three most serious problems (see Table 4.12 on page 134). Even though 'Electricity' was also listed as additional unmet need by at least two participants in two of the pilot-sites (Gaza and Sudan) (see Table 4.11), and was also named as missing item during focus group discussions in the two sites (see Table 4.16 on

page 152), the decision was made by the HESPER project's steering committee not to include the item into the HESPER Scale, as it had not emerged as an important item during any of the previous developmental stages.

Furthermore, as suggested by interviewers in Jordan (see 'Free-text results' in 'Interviewer survey and feedback' section), the order of HESPER items was rearranged so that community-level items were listed at the end of the scale rather than in the middle. The order of several other items was also changed accordingly, to improve the flow of the scale. However, basic items were still listed at the beginning of the scale, in accordance with what is considered advisable within scale development [63]. Finally, changes were made to the lay-out of the 'Additional unmet needs' and 'Priority ratings' sections, based on experiences made during pilot-testing of the scale, to simplify them for interviewers (see Appendix A3).

Revisions to the HESPER interviewers' training manual included simplifying or clarifying sentences or sections by rephrasing them; reducing repetitions (as advised by interviewers in Jordan and Sudan; see 'Free-text results' in 'Interviewer survey and feedback' section); adding explanations and examples for individual HESPER items (as suggested by interviewers in Gaza; see 'Free-text results' in 'Interviewer survey and feedback' section); and introducing an overview of chapters at the beginning of the manual.

Table 4.18 Changes made to HESPER items following pilot-testing of the draft scale in Jordan, Gaza and Sudan, in preparation for field-testing of the scale

HESPER items (pilot-testing)*	HESPER items (field-testing)**
1. Drinking water (1)	1. Drinking water (1)
2. Food (2)[1]	*2. Food (2)[1]*
3. Cooking (2)[1]	3. Place to live in (4)
4. Place to live in (3)	4. Toilets (5)
5. Toilets (4)	5. Keeping clean (6)
6. Keeping clean (5)	*6. Clothing, shoes, bedding or blankets (7)[2]*
*7. Clothing and bedding (6)[2,***]*	*7. Income or livelihood (10)[3]*
8. Physical health (8)	8. Physical health (8)
9. Health care (9)	9. Health care (9)
*10. Making a living (7)[3,***]*	10. Distress (25)
11. Safety (11)[4]	*11. Safety (11, 13)[4]*
12. Education for your children (12)	12. Education for your children (12)
13. Safety and protection for your children (11)[4]	*13. Care for family members (21)[9]*
14. Safety and protection from violence for women in your community (23)[5]	14. Support from others (23)
*15. Protection by the law in your community (22)[6,***]*	15. Separation from family members (22)
16. Burying and mourning the dead in your community[7]	*16. Being displaced from home (26)[11]*
17. Alcohol use in your community (24)[8]	*17. Information (29)[13]*
18. Drug use in your community (24)[8]	*18. Aid (28, 30)[12]*
19. Mental illness in your community (25)	19. Respect (27)
20. Care for people in your community who are on their own (26)	*20. Moving between places (31)[14]*
*21. Care for family members in your household (13)[9,***]*	*21. Too much free time (32)[15]*
22. Separation from family members (15)***	*22. Law and justice in your community (15)[6]*
23. Support from others (14)	*23. Safety or protection from violence for women in your community (14)[5]*
24. Religious, cultural or spiritual practices[10]	*24. Alcohol or drug use in your community (17, 18)[8]*
25. Distress (10)	25. Mental illness in your community (19)
26. Living away from home (16)[11]	26. Care for people in your community who are on their own (20)
27. Respect (19)	
*28. Having a say in the aid response (18)[12,***]*	
*29. Information about the situation (17)[13,****]*	
*30. Aid being handed out fairly (18)[12,***]*	
31. Moving around between places (20)[14]	
*32. Having enough to do during the day (21)[15,***]*	

See next page for footnotes of Table 4.18.

Footnotes for Table 4.18

[1] *'Cooking' included under 'Food'*
[2] *Item rephrased*
[3] *Item rephrased*
[4] *'Safety and protection for your children' included under 'Safety'*
[5] *Item rephrased*
[6] *Item rephrased*
[7] *Item excluded*
[8] *'Alcohol use…' and 'Drug use in your community' merged*
[9] *Item rephrased*
[10] *Item excluded*
[11] *Item rephrased*
[12] *'Having a say in the aid response' and 'Aid being handed out fairly' merged as 'Aid'*
[13] *Item rephrased*
[14] *Item rephrased*
[15] *Item rephrased*

Revised items are italicised. Previous (for field-testing items) or subsequent (for pilot-testing items) item numbers are displayed in brackets.
Items are listed according to the order in which they appeared in the version of the draft HESPER Scale used during pilot-testing (see Appendix A2).
[*] See Appendix A2 for item questions.
[**] See Appendix A3 for item questions.
[***] Item headings from pilot-testing are listed as phrased during pilot-testing in Jordan (the first pilot-site). Revisions were made to a few items following this. Item headings were phrased as follows in Gaza (item numbers stated in brackets): 'Clothing, shoes and bedding' (7), 'Livelihood' (10), 'Law and justice in your community' (15), 'Participation in the aid response' (28), 'Getting help from aid agencies' (30), and 'Too much free time' (32). In Sudan, items were phrased as follows: 'Clothing, shoes and bedding' (7), 'Income and livelihood' (10), 'Law and justice in your community' (15), 'Care for family members' (21), 'Separation from family members and friends' (22), 'Being involved in the aid process' (28), 'Getting help from aid agencies' (30), and 'Too much free time' (32).
[****] This item is listed as phrased during pilot-testing in Gaza and Sudan. In Jordan, the item was divided into three parts: 'Information about the situation in Iraq' (29a), Information about aid' (29b), and 'Information about your legal rights' (29c). The latter two items were incorporated into the items 'Getting help from aid agencies' (30) and 'Law and justice in your community' (15) in Gaza and Sudan (item numbers stated in brackets).

4.4.5 Discussion

Findings

The draft HESPER Scale was successfully pilot-tested in the field with populations affected by humanitarian crises in Jordan, Gaza and Sudan. Overall, the HESPER Scale and accompanying interviewers' training manual appeared feasible, intelligible, comprehensive, culturally applicable and suitable to the different local contexts. Furthermore, the research methodologies employed seemed appropriate for the three pilot-sites, and therefore for the kind of settings in which the HESPER Scale was subsequently going to be field-tested.

Inter-rater reliability of the draft HESPER Scale was excellent across the three pilot-sites, and interviewers were easily able to administer the scale to participants after being trained through use of the interviewers' training manual (in Jordan and Gaza by trainers who were new to the training materials), suggesting that the interviewers' training manual was adequate, that interviewers fully understood the HESPER Scale and its rating system, and that HESPER items were intelligible to participants. Inter-rater reliability improved across the three pilot-sites (i.e. it was lower in Jordan, the first pilot-site, than in the other two settings), which is likely to be a reflection on the small improvements that were made to the draft HESPER Scale between sites.

Even though high internal consistency scores are not essential in quality-of-life or needs assessment instruments such as the HESPER Scale because the individual items do not necessarily need to causally relate to each other [103, 107] (see Section 2.4 for further details), internal consistency was found to be good across the three pilot-sites. The inter-item correlation matrix which was computed as part of the internal consistency analyses also showed that none of the individual items correlated highly with each other, indicating that all items were sufficiently different from each other, and were therefore not superfluous from a scale development perspective.

Interviewers' and participants' responses in the surveys, as well as in the participant focus groups and interviewer feedback sessions, indicated that they found the draft HESPER Scale and training materials to be intelligible, comprehensive, culturally applicable, and useful overall. Together with data that was collected during the survey with humanitarian experts in 'Phase 1' of the project on the comprehensiveness and relevance of items (see Section 3.7 and Appendix E1), this data provided evidence for face validity and content validity of the HESPER Scale [63, 103], as well as for the scale's item equivalence, which is important in determining whether items are appropriate and comparable across cultures for instruments that are being used across different settings [111] (also see Section 2.4).

Moreover, all HESPER items were rated as unmet need by at least one participant in each of the three pilot-sites, and all items were rated by at least one participant across sites as one of their three most serious problems, demonstrating that the list of HESPER items was universally relevant. What is more, no particular additional unmet need item was listed by participants in all three sites, and only participants in Jordan rated any additional unmet needs they listed as one of their three most serious problems, suggesting that there were no important universal items missing on the HESPER Scale.

However, several changes were made to the draft HESPER Scale based on recommendations by interviewers and participants in the three pilot-sites, as well as by members of the HESPER project group in the expert survey. These included removing, combining, broadening, rephrasing or clarifying several HESPER items, as well as changing the order of items, and revising the format of the 'Additional unmet needs' and 'Priority ratings' sections. Whilst quantitative data on unmet need ratings and priority ratings of HESPER items – and their rankings – was useful in revealing the universality and relevance of HESPER items across settings, data from the interviewer and participant surveys, participant

focus groups, interviewer feedback sessions, and data on additional unmet needs were valuable in aiding the restructuring and rephrasing of items.

Furthermore, data from the expert survey with members of the HESPER project's steering committee and international advisory group, together with responses from the interviewer and participant surveys, was valuable in identifying an appropriate length for the HESPER Scale. The scale was shortened by reducing and combining items as a result. Although around half of participants found the HESPER interview too brief and quick, indicating their preference for a more in-depth interview process, a lengthier assessment method was not the aim of the HESPER project (see Section 3.2).

Interviewer feedback was also helpful for the refining of the interviewers' training manual. For instance, repetitions were removed from the manual, which is in line with previous suggestions that shorter concise manuals are preferable to longer ones due to the time constraints commonly experienced by aid worker interviewers [269].

Limitations

The use of population groups to which the HESPER Scale was applicable post-development should have reduced some of the biases that may have existed during 'Phase 1' of the project, in terms of taking into account affected populations' views in the development of the scale (see Appendix E1). However, there were still several limitations and challenges to the pilot-testing study, many of which were related to the difficulties associated with testing in humanitarian settings, where resources are often low, structures may not be well-established [49], and the local language spoken is frequently foreign to that of the research team.

One limitation was that convenience sampling techniques were employed rather than random probability sampling methods, so that participants may not have

been characteristic of the populations they were representing. Furthermore, the sample size employed was relatively small, in particular the sample used to measure inter-rater reliability. However, as the main aim of pilot-testing was to assess the feasibility, intelligibility and relevance of the draft HESPER Scale, rather than to obtain accurate data on perceived needs or to measure some effect size, non-probability sampling techniques and a small sample size were considered sufficient. Also, random probability samples and a much larger sample size were employed during the subsequent field-testing stage of the HESPER project, which should have counter-acted any such biases which may have been present during the pilot-testing stage.

A further potential limitation relates to the selection of pilot-sites. All three sites were Arabic-speaking urban settings, two of which were in the Middle-East. This may have limited the generalizability of the results to other contexts, for instance those in camps or rural settings, or in non-Arabic speaking countries. Additionally, as the draft HESPER Scale was only pilot-tested in Arabic, this may have impacted on the ability to identify problems in the English version of the scale. However, the results of the pilot-study showed that the demographic characteristics of participants varied greatly between sites, that the level and type of needs differed in the three settings, and that interviewers and participants in the three sites made distinct contributions and recommendations, suggesting that the pilot-sites were sufficiently diverse. Moreover, the Arabic spoken in Sudan is very different to that spoken in the other two contexts, and Juba – even though it is the capital of the newly formed South Sudan – is distinctly rural in nature (referred to by locals as the world's biggest village). What is more, in 2009, around the time of the research, almost two thirds of refugees worldwide lived in urban areas [15], suggesting that the populations employed during pilot-testing of the draft HESPER Scale were representative of a large number of emergency-affected populations.

A related limitation was that the author did not speak Arabic, which meant that she was not able to fully understand the interviews and focus group discussions (even though a translator assisted her in Jordan), restricting her ability to assess their quality. Also, in Sudan, although interviewers were given time to practice interviews in Juba Arabic during training sessions, most of the practice interviews were conducted in English, as the training was carried out by the author; interviewers may therefore have been less familiar with the Arabic version of the HESPER Scale, which may have impacted on the quality of the interviews. Indeed, one of the challenges of conducting research in Juba was that the local population speaks a variety of different languages and dialects. Whilst interviews and focus group discussions were primarily conducted in Juba Arabic, for many participants this was not their first language, so that at times the English language version of the HESPER Scale had to be used to clarify terms to participants. Furthermore, the interviewers' training manual was not translated into Arabic due to resource constraints; however, as interviewers across the three pilot-sites spoke English sufficiently, this should not have impacted on the quality of the interviews.

Another effect of having conducted research in a foreign-language setting was that the possibility of measurement error may have been amplified due to materials having been translated, especially as in Sudan methods of translation were not ideal due to resource constraints. Inaccuracies may have thus been brought about in the data due to blank project materials having been translated prior to data collection and raw data having been translated back into English following data collection. However, to reduce errors in translation, the author double-checked all data, and compared the different-language versions of materials and raw data where possible. Furthermore, in Jordan back-translation techniques were employed, which should have diminished inaccuracies in the translations.

Response bias is another possibility that may have led to data being inaccurate across sites. For instance, participants may have falsely declared having a serious problem in a particular area in the hope of gaining more support from aid agencies [270], or may have denied having a serious problem out of embarrassment or shame. Additionally, a social desirability effect [248] may have led to participants and interviewers responding overly positively in the surveys, participant focus groups and interviewer feedback sessions, for example because they did not feel comfortable answering honestly in front of the researcher or interviewer. Interviewer bias, in which interviewers influence the response given, is also a possibility [103]. However, as participants and interviewers made valuable suggestions and recommendations, rather than simply reporting positively on the draft HESPER Scale, interviewers' training manual, and their experience of interviews, it is likely that they felt comfortable and confident to respond honestly.

A further limitation was that members of the HESPER project group, including the author, were not able to visit Gaza for pilot-testing of the scale due to security risks. However, the author remained in close contact with the field-staff member of the implementing organisation (Fafo [257]) throughout the study, and ensured that all processes were conducted according to the research protocol. Implementing field staff members also had much experience of conducting humanitarian surveys and were therefore highly competent at carrying out the research.

Interviewers in Sudan experienced some difficulties in the implementation and facilitation of focus groups, which was likely due to their inexperience in conducting such groups (as the more experienced facilitators in the other two pilot-sites experienced no such problems). Indeed, a few focus group participants left before the discussions were completed due to their long duration; whilst focus groups were around two hours long in Jordan and Gaza, in Sudan they took up to around four hours. However, more experienced facilitators were not

available in Sudan because of resource constraints, and although focus groups were lengthy, the interviewers were able to deliver the expected outputs on time.

A final limitation was that one of the open-ended questions in the expert survey with members of the HESPER project group on the ideal length of the HESPER Scale was misunderstood by several participants, so that the question could not be adequately analysed. Indeed, it is extremely common within research for survey respondents to misunderstand questions [103]. However, as expert survey participants gave rich responses to the other questions in the survey, the overall free-text analyses of the survey were sufficient to gain an overview of expert participants' views on the ideal length of the scale.

Further work

Pilot-testing of the draft HESPER Scale in three small samples of populations affected by humanitarian emergencies demonstrated the feasibility, intelligibility, cultural applicability, usefulness and comprehensiveness of the HESPER Scale, as well as establishing its face validity and content validity. The HESPER Scale was subsequently field-tested in three larger samples amongst populations affected by humanitarian crises (see Chapter 5), to assess the scale's psychometric properties, as is desirable and useful within scale development [103] (also see Section 2.4).

CHAPTER 5

Psychometric Field-Testing of HESPER Scale

5.1 Introduction

This chapter describes field-testing of the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale in three relevant populations affected by humanitarian emergencies to assess its psychometric properties (i.e. reliability and validity) [18, 63, 103, 106, 207], which followed on from pilot-testing of the draft scale in the United Kingdom (UK), Jordan, Gaza and Sudan (see Sections 4.3 and 4.4). Psychometric testing is essential within scale development in determining a scale's scientific robustness and adequacy [103]. Whilst the testing of reliability is important in establishing an instrument's ability to give consistent results over time (test-retest reliability) or across different interviewers (inter-rater reliability), the assessment of validity is important in determining a scale's capacity to measure what it purports to measure (see Section 2.4 for further details).

This chapter represents the first part of 'Phase 3' of the HESPER project, as highlighted in the box below.

- *Phase 1 (2008):* Development of a first draft scale through a process of item generation and item reduction, based on first a literature review, and second a survey with humanitarian experts (Section 3.7 and Appendix E1).
- *Phase 2 (2009):* Preparation of the draft scale for pilot-testing (Section 4.2). Pre-testing of the draft scale in the UK with refugees from the Democratic Republic of the Congo (DRC) (Section 4.3), and subsequent pilot-testing in Jordan with displaced Iraqi people, and with the local populations in Gaza and Sudan (Section 4.4), to assess the scale's feasibility, intelligibility, comprehensiveness and cultural applicability, to determine the suitability of training materials, and to establish face and content validity. Expert survey on the ideal length of the scale (Section 4.4).
- ***Phase 3 (2010):*** **Field-testing of the revised draft scale in Jordan with displaced Iraqi people, in Haiti with people living in post-earthquake displacement camps, and in Nepal with Bhutanese refugees, to assess its psychometric properties (i.e. inter-rater and test-retest reliability, internal consistency, and criterion (concurrent) validity) (Chapter 5).** Study to measure the level of perceived needs in these settings, and to assess the relationship between symptoms of common mental disorder, perceived unmet needs, and past traumatic events (Chapter 6).

Some of the information included in this chapter was published as part of a research paper on the development and psychometric properties of the HESPER Scale, on which the author of this thesis had first authorship [168] (see Appendix F1 for paper).

5.2 Methods

Design

As was the case during pilot-testing of the draft HESPER Scale (see Section 4.4), field-testing of the revised scale was conducted with a wide range of populations affected by humanitarian emergencies, to ensure that the scale was assessed in populations representative of those for whom it was being developed [49, 62, 207], and to ensure equal participation across different groups [77]. The three field-testing sites were Jordan (displaced Iraqi people), Haiti (people living in post-earthquake displacement camps), and Nepal (Bhutanese refugees).

Psychometric field-testing of the HESPER Scale was conducted as part of a larger study on the use of the scale in measuring perceived needs, and in providing data to predict mental health outcome (see Chapter 6). A cross-sectional design was employed. Participants in the three field-sites were interviewed in one-to-one assessments by previously trained local interviewers in their own homes/shelters on either one or two occasions:

Time 1: All participants (817 in total; 269 in Jordan and Nepal each, and 279 in Haiti) were administered the HESPER Scale (see Appendix A3) as measure of perceived needs (see Chapter 6 for results on the level of perceived needs in the three settings). To establish the HESPER Scale's psychometric properties, the results of which are discussed in this chapter:

- To assess inter-rater reliability, for a sub-sample of participants (46 in Jordan, 44 in Haiti, and 42 in Nepal) a second interviewer acted as silent rater in completing the HESPER Scale.
- To measure criterion (concurrent) validity, a sub-sample of participants (77 in Jordan, 79 in Haiti, and all 269 participants in Nepal) were administered 27 selected questions from an established quality-of-life instrument – the World Health Organization Quality of Life (WHOQOL)-100 [271] (see Appendix D3). The General Health Questionnaire (GHQ)-12 [272] (which was primarily included for the larger mental health study;

see Chapter 6) acted as further external criterion for the HESPER item 'Distress'.

Criterion (concurrent) validity was an appropriate way in which to test the validity of the HESPER Scale, since there was an external criterion available for several of the scale's items that could be measured simultaneously. Face validity and content validity of the HESPER Scale had also already been established during previous pilot-testing of the draft HESPER Scale (see Section 4.4).

Time 2: To assess test-retest reliability, the HESPER Scale was re-administered to a sub-sample of participants in two field-sites (70 and 73 participants in Jordan and Nepal respectively) a second time around one week after the first interview by the same interviewer who had administered the scale to them previously.

Samples

In total, 269 Iraqi participants displaced following the 2003 invasion to Iraq were interviewed in Jordan in July 2010; 279 people living in displacement camps in Haiti following the January 2010 earthquake were interviewed in September 2010; and 269 Bhutanese refugees were interviewed in Nepal in October/November 2010. However, only a sub-sample of these participants were employed for psychometric field-testing of the HESPER Scale (see 'Design' section above for further details), the results of which are discussed in this chapter; the study involving the remaining participants is outlined in Chapter 6. All participants were at least 18 years old, as the HESPER Scale was being developed for adult populations only. There were no further inclusion/exclusion criteria.

Members of the displaced Iraqi population in Jordan were suitable as participants for this study, as they had been exposed to large-scale conflict following the US-led invasion to Iraq in 2003. This had resulted in the

displacement of a large number of Iraqi people, both within and outside of Iraq, especially to neighbouring countries. At the time of this study, there were an estimated 450,000 to 750,000 displaced Iraqi people living in Jordan [253]. Rather than living in camps, most of them lived dispersed across the urban regions of Jordan, with around 75% of them living in Amman [254].

A further justification for including the Iraqi population in Jordan during field-testing of the HESPER Scale was that this population had been successfully included during previous pilot-testing of the draft scale, where it had shown itself to be relevant, culturally applicable and feasible, and interviewers and participants had reported positively on the pilot-testing experience (see Section 4.4 for results, and for further details on this population group).

Members of the internally displaced population in Haiti were suitable as study participants, as they had been exposed to a large-scale natural disaster – the 7.0 magnitude-earthquake that shook Haiti on 12th January 2010, the country's worst earthquake in 200 years and one of the largest single-day casualty counts in history. The earthquake caused wide-spread destruction and chaos in the already troubled Haiti, with an estimated 222,570 people killed (2% of the population) and more than 300,000 people injured [273, 274]. 2.3 million people were forced to leave their homes (19% of the population) [275], with many of them moving to spontaneously set-up tent camps. Even though the earthquake in Haiti prompted an immense international humanitarian response [273, 276] and despite humanitarian agencies' best efforts, nine months after the earthquake (shortly after the time of this study) 1.3 million people – over half of those affected by the earthquake – were still living in one of over 1,300 displacement camps (three of which were included in this study) [274].

Members of the Bhutanese refugee population in Nepal were suitable for inclusion into this study, as they had been living in a refugee camp for several years. In the early 1990s, thousands of people of Nepali descent were forcibly

expelled from Bhutan following inter-ethnic tensions, around 100,000 of whom settled within refugee camps in Eastern Nepal [277]. At the time of this study in 2010, whilst a large number of refugees had already been resettled to countries such as the United States of America (USA), Australia, or Canada (as they were not permitted to return to Bhutan, or to stay in Nepal permanently) [277], many more still remained in these refugee camps. The largest of these camps was used as study site – Beldangi-II camp in the Jhapa district of Nepal.

Participants in all three field-sites were selected into the study using random probability sampling, as this method is preferable to non-probability sampling in obtaining a representative sample [65]. However, different random sampling methods were employed in the three settings according to what was appropriate and feasible (see 'Procedure' section below for further details on the sampling methods employed in each of the field-sites, as well as on sample size calculations).

Settings

Interviews during field-testing of the HESPER Scale were conducted in participants' own homes or shelters in all three settings – in Jordan in the capital Amman, as well as in two municipalities to the North of Amman, Zarqa and Irbid, and one to the South of Amman, Madaba; in Haiti in Champs de Mars and Bolosse camps in the capital Port-au-Prince, as well as in Pinchinat camp in Jacmel in the South of Haiti; and in Nepal in Beldangi-II camp, Jhapa district, in the South-Eastern corner of Nepal. Before data collection commenced, the interview process was pre-tested with a few participants in their own homes or shelters in Amman (Jordan), in a small displacement camp in Port-au-Prince (Haiti), and in Sanishare camp, Jhapa district (Nepal).

Interviewer training sessions before data collection, as well as interviewer feedback sessions following and during data collection, took place in the offices of the local implementing agency 'Accurate Opinion' in Amman (Jordan), in the

offices of the local collaborating agency 'International Medical Corps Haiti' (IMC) [278] in Port-au-Prince (Haiti), and in the offices of the local collaborating agency 'TPO Nepal' [279] in Damak, Jhapa District (Nepal) (see 'Procedure' section below for further details on these organisations).

Measures

Two instruments were employed as external criteria during psychometric field-testing of the HESPER Scale, to assess criterion (concurrent) validity of the scale – the WHOQOL-100 [271] (see Appendix D3) and GHQ-12 [272]. Fifteen of the HESPER Scale's 26 individual need items, as well as the total number of unmet needs, were compared to similar questions of the WHOQOL-100. The GHQ-12 was used as further external criterion for the 'Distress' item of the HESPER Scale. For the remaining 11 of the 26 HESPER items there was no comparable external criterion available.

The WHOQOL-100 was employed as external criterion, since several of its 100 questions were comparable to some of the HESPER Scale's items. Although the WHOQOL-100 is a quality-of-life measure, whilst the HESPER Scale is a needs assessment tool, previous research has found quality of life to be closely linked to needs [21-24] (also see Section 2.3.1). Furthermore, the WHOQOL-100 was developed, and had been used and validated, widely across different settings; for instance, it was field-tested in 23 countries with over 11,800 participants (including for example Brazil, China, Israel and India), where it was found to have good to excellent psychometric properties [280]. Although the WHOQOL-100 had not been validated in the settings in which the HESPER Scale was field-tested, as it had been successfully used and validated in such a multitude of different cultural contexts worldwide, it was considered adequate as external criterion for the HESPER Scale.

The GHQ-12 was suitable as external criterion for the HESPER Scale's 'Distress' item, as it provides a distress score based on 12 questions relating to symptoms

of depression and anxiety. It had been used extensively worldwide (e.g. [281]), for example in Jordan and Nepal [282, 283], and in Iraq as a measure of distress as part of the World Mental Health Survey Initiative which comprised over 154,000 participants in 28 countries [284]. The scale had also been validated and shown to have good psychometric properties in a wide variety of settings and languages, including Arabic and Nepali versions [283, 285, 286].

Procedure

Field-testing of the HESPER Scale, including the training of interviewers and data collection, took place in Jordan between 30th June and 14th July 2010; in Haiti between 14th September and 1st October 2010; and in Nepal between 4th October and 4th November 2010.

Field-testing of the HESPER Scale in Jordan was conducted in collaboration with the World Health Organization (WHO) Jordan country office [256] (as was the case for pilot-testing of the draft scale; see Section 4.4); a local organisation, Accurate Opinion, was also contracted to recruit and train interviewers, and to organise the data collection. In Haiti, field-testing of the scale was carried out in collaboration with IMC [278], which is a global humanitarian non-profit organization that focuses on health interventions and programmes. In Nepal, field-testing was conducted in collaboration with HealthNet TPO and TPO Nepal [279, 287], which are affiliated humanitarian organizations with much experience of conducting high-quality research in humanitarian settings (see 'Acknowledgements' section for a list of individuals involved in field-testing of the HESPER Scale).

The author visited Jordan from 27th June to 21st July 2010 for field-testing of the HESPER Scale, Haiti from 12th to 29th September 2010, and Nepal from 2nd to 14th October 2010, to oversee data collection and the training of interviewers together with the local collaborating agencies. Whilst she was able to remain in Jordan throughout the entire data collection process, she was only able to visit

Haiti for most of the data collection, and Nepal for some of the data collection, due to an overlap between field-testing schedules in Haiti and Nepal, and a one-and-a-half week religious holiday period in Nepal which interrupted data collection. However, she was present in all sites for the training of interviewers, the preparations for data collection, and a substantial part of the interviews. Field staff members of the local implementing agencies (IMC [278] in Haiti, and TPO Nepal [279] in Nepal), oversaw the remaining data collection; the author remained in close contact with them throughout data collection via Skype and email.

The overall research procedures for field-testing of the HESPER Scale included the following:

- Obtaining of ethics approval for the study.
- Recruitment of organizations to collaborate for field-testing in three relevant populations affected by humanitarian emergencies.
- Translation and adaptation of project materials to the local context for field-testing in the three field-sites (Jordan, Haiti and Nepal).
- Recruitment and training of interviewers in the three field-sites.
- Sample size calculations for field-testing in the three sites.
- Sampling of study participants in the three field-sites.
- Data collection in the three field-sites.

These procedures are now described in turn.

Ethics

Full ethics approval for field-testing of the HESPER Scale in Jordan, Haiti and Nepal was obtained through the King's College London (KCL) Psychiatry, Nursing and Midwifery Research Ethics Committee (PNM/08/09-137; see Appendix D5 for ethics clearance letters). Further approvals were obtained from the Ministry of Interior, Ministry of Planning and Ministry of Health in Jordan, and the Nepal Health Research Council (NHRC) in Nepal (see Appendices D6 and D7 for

approval letters). No further approval was required from the local authorities in Haiti.

A participant information sheet and consent form (see Appendices D1 and D2) were prepared and approved as part of the ethics process. Participants were assigned a participant number, which was used on all project materials instead of their names. The sheet linking participant numbers with names was kept separately at all times, to ensure participants' anonymity and confidentiality. Participants were fully informed of the aims and objectives of the study before taking part; they were not permitted into the study unless they had either read the participant information sheet (where they were sufficiently literate to do so), or interviewers had read the participant information sheet to them. Participants were also given the opportunity to ask any further questions before giving their consent to participate, and were provided with a copy of the participant information sheet to keep. Moreover, it was ensured that participants understood their right to withdraw from the study at any time without having to give a reason and without further consequences.

As was the case during pre-testing of the draft HESPER Scale in the UK with refugees from the Democratic Republic of the Congo (DRC) (see Section 4.3.2), a flexible consent procedure was employed. All participants in the three field-sites gave either their written or verbal voluntary informed consent to take part (verbal consent in Jordan and Nepal; written or verbal consent in Haiti). Where verbal consent was taken, interviewers signed the participant information sheet to witness that the participant had agreed to take part. Where written consent was obtained, participants signed the consent form themselves. This flexible approach was employed because the requirement of written informed consent, which is the norm within scientific research, may not be appropriate amongst all populations affected by humanitarian emergencies (see Section 4.3.2 for further details). For instance, in Jordan, many Iraqis were very fearful of being deported, and were therefore wary of signing forms. In Nepal, a verbal consent procedure

was chosen due to low literacy rates, and due to the local collaborators (TPO Nepal) advising that participants would be more comfortable with a verbal rather than a written consent process. In Haiti, a written consent procedure was considered suitable by the local collaborating agency (IMC), though participants were permitted to give their verbal consent if they preferred to do so.

Recruitment of local organizations for collaboration

As was the case for pilot-testing of the draft HESPER Scale in Jordan, Gaza and Sudan (see Section 4.4.2), field-testing of the scale relied on the willingness and ability of local organizations to collaborate. To recruit organizations, a letter inviting them to participate in field-testing of the HESPER Scale was prepared by the author together with the main collaborator at WHO. The letter was then sent by email to the same humanitarian staff members and experts who were invited to collaborate for pilot-testing of the draft scale; over 80 invitations were sent. A summary field-testing document providing an overview of the field-testing procedure, a HESPER project framework, the HESPER interviewers' training manual, as well as a document containing the instruments to be used during field-testing, were sent as an attachment to the letter.

As was the case during the pilot-testing stage, several organizations displayed an interest to collaborate, and organizations were chosen depending on whether the setting in which they suggested to field-test the HESPER Scale was relevant, the feasibility of testing in the proposed setting, as well as whether organizations had sufficient resources to facilitate field-testing (see Section 4.4.2 for further details for selection considerations).

Translation and adaptation of project materials

Project materials for field-testing of the HESPER Scale were prepared in Arabic in Jordan, in Nepali in Nepal, and in Haitian Creole or French in Haiti. Arabic and French versions of the WHOQOL-100 [271], as well as Arabic, French and Nepali versions of the GHQ-12 [272], were obtained from distributors or other research

groups before field-testing of the HESPER Scale commenced. As there was no Nepali version of the WHOQOL-100 available, the Nepali version of the shorter 26-item WHOQOL-BREF [288] was obtained, and was adapted accordingly. This involved the translation of 11 items which were required for the field-study but were not contained in the WHOQOL-BREF, and the deletion of 11 items which were not relevant to the study; the other 15 items of the WHOQOL-BREF were retained.

The translation of project materials was coordinated by the local collaborating agencies in the three field-sites (WHO Jordan country office [256] in Jordan, IMC [278] in Haiti, and TPO Nepal [279] in Nepal). Project materials that were translated included the HESPER Scale, HESPER interviewers' training manual, participant information sheets and consent forms, as well as the translation of the WHOQOL-100 and GHQ-12 into Haitian Creole from French (as these instruments were not available in Haitian Creole, and Haitian Creole is based on the French language), and the translation of several WHOQOL-BREF items into Nepali (see above). Materials were prepared and sent to staff of the collaborating organizations by the author for translation prior to data collection, and once translated were checked by her for inaccuracies by examining the back-translated versions and/or formats of translated materials.

As was the case during pilot-testing of the draft HESPER Scale (see Section 4.4.2), materials were translated or adapted according to what was feasible in each of the three field-sites, based on the resources available. In Jordan and Nepal, back-translation methods were employed. This is commonly considered to be the gold standard method of translation within scientific research, and ensures that meanings are retained, that biases in the translation process are reduced [236, 262], and that the scale has semantic (or functional) equivalence [111] (see Section 2.4 for further details). The same back-translation techniques were employed as during previous pilot-testing of the draft HESPER Scale in Jordan. In brief, this entailed the translation of project materials from English into the local

language (Arabic in Jordan, Nepali in Nepal), the subsequent back-translation of materials into English by a different translator, and the finalisation of the translated materials by comparing the original versions with the back-translated versions [261] (see Section 4.4.2 for further details).

In Haiti, simple translation methods were employed, as back-translation methods were not feasible due to time and resource constraints. Materials were translated either from French into Haitian Creole where French versions were available (i.e. for the WHOQOL-100 and GHQ-12), or from English into Haitian Creole where no French versions existed (i.e. for the HESPER Scale, participant information sheet and consent form). Furthermore, the HESPER interviewers' training manual was translated from English into French rather than into Haitian Creole, as interviewers spoke French sufficiently (French is widely spoken in Haiti), and as the local collaborating organization (IMC) advised that French was more suitable to the language employed in the manual. To reduce inaccuracies in the translation of materials, translations were double-checked by two translators who were fluent in Haitian Creole, French and English.

One of the advantages of the HESPER Scale is that it allows for local context-specific items to be included in addition to the list of universal items (see Section 3.2). During field-testing of the HESPER Scale in Jordan and Haiti, an additional need item was added to the scale – 'Residency or resettlement' in Jordan, and 'Burying and mourning the dead in your community' in Haiti –, based on previous findings made during pilot-testing of the draft HESPER Scale in Jordan that a lack of residency status or resettlement to a third country was a commonly experienced problem in this setting (see Section 4.4.3), and on field-observations by the collaborating agency (IMC) that problems related to burying and mourning the dead were common in Haiti.

Recruitment of interviewers

As was the case during pilot-testing of the draft HESPER Scale (see Section 4.4.2), and consistent with how the scale was intended to be administered post-development [167], native interviewers familiar with the local conditions were recruited by the collaborating agencies in each of the three field-sites. The number of interviewers recruited depended on the resources available. Twenty-six interviewers were recruited in total across the three field-sites – 12 in Jordan (eight male, four female); eight in Haiti (four male, four female); and six in Nepal (three male, three female). Interviewers in Haiti and Nepal were of the same cultural background as participants, to ensure that they had an understanding of participants' cultural norms and that they were better able to gain participants' trust [255]. In Jordan, Jordanian rather than Iraqi interviewers were employed, due to laws which meant that the implementing agency (Accurate Opinion) was not able to employ Iraqi people. However, these interviewers were highly experienced in interviewing a wide range of population groups, including displaced Iraqi people. All interviewers in the three settings were educated to at least high-school level (i.e. 12 years of education), as this is the minimum requirement for HESPER interviewers [167].

Training of interviewers

The training of interviewers was conducted in Jordan between 30th June and 4th July 2010; in Haiti between 14th and 17th September 2010; and in Nepal between 4th and 8th October 2010. Interviewers received three-and-a-half days training in Jordan and Haiti, and four-and-a-half days training in Nepal by a local instructor of the implementing organizations (Accurate Opinion in Jordan, IMC in Haiti, and TPO Nepal in Nepal) in their native language (Arabic in Jordan, Haitian Creole/French in Haiti, and Nepali in Nepal), to ensure that interviewers understood all research processes sufficiently. The author was present during training sessions (with assistance from a translator), to support trainers, to ensure that training sessions were conducted adequately, and to answer any questions.

Interviewer training sessions covered all aspects of the interview process, including expected outputs, reasons for the study, logistical arrangements, and how to administer all project materials (i.e. the HESPER Scale, selected questions from the WHOQOL-100, the GHQ-12, as well as the traumatic events list of the Composite International Diagnostic Schedule (CIDI) [289] used for the second part of the study (see Chapter 6)), with a focus on practice interviews and role plays, as well as a half-day pilot practising interviews in the field. As was the case during pilot-testing of the draft HESPER Scale (see Section 4.4.2), the HESPER interviewers' training manual was used to train interviewers in administering the scale.

Sample size calculations

Sample size calculations were performed to estimate required sample sizes for psychometric field-testing of the HESPER Scale in the three field-sites. These were primarily based on the test-retest reliability statistic. The calculations showed that a minimum sample size of 69 participants per site would be required to assess test-retest reliability statistics [290], using a significance level of 0.05 (P=0.05), 0.8 power (1-ß), a minimum acceptable level of test-retest reliability (intraclass correlation coefficient (ICC)) of 0.6, and a predicted test-retest reliability (ICC) of 0.7. The value for predicted test-retest reliability was estimated based on the psychometric properties of the various Camberwell Assessment of Need (CAN) versions [19, 25, 26, 176, 179, 182, 187, 291]); estimates were extracted from previous CAN publications, and the lowest published test-retest reliability statistic was used as estimate. This conservative approach was adopted, as the settings for which the HESPER Scale was being developed were very different from those to which the various CAN versions were applicable; it was therefore not clear whether reliability statistics of the HESPER Scale would be comparable to those of the CAN versions. A further reason for using conservative estimates was that the HESPER Scale was being

developed for a wide range of cultural settings, in which reliability statistics may potentially vary.

The sample size of 69 participants per site that was estimated based on the test-retest reliability statistic was also considered adequate to measure criterion (concurrent) validity of the HESPER Scale; it allowed for the detection of correlations of at least r=0.3 with power (1-ß) 0.99, or r=0.2 with power (1-ß) 0.83.

Additionally, a sample size calculation was performed to estimate sample size requirements for inter-rater reliability statistics, based on findings made during previous pilot-testing of the draft HESPER Scale in Jordan, Gaza and Sudan (see Section 4.4). This showed that a minimum sample size of 39 participants per site would be required to test inter-rater reliability [290], using a significance level of 0.05 (*P*=0.05), 0.8 power (1-ß), a minimum acceptable level of inter-rater reliability (ICC) of 0.7, and a predicted inter-rater reliability (ICC) of 0.8.

Sample size calculations for total sample sizes employed (i.e. total number of participants interviewed) during this study are described in Chapter 6.

Sampling of participants

Iraqi participants in Jordan were recruited through a multi-stage cluster sampling design. A cluster design was chosen, as there was no complete list of Iraqi households or individuals in Jordan available, ruling out the more straightforward simple or systematic random sampling techniques [292]. Thirty clusters of city districts were included, as this is considered to be an adequate number of clusters in most settings, and it is the number commonly employed within epidemiological surveys [292]. The sample was geographically representative of Iraqis living in Jordan, with around 75% of the sample in Amman (23 clusters) and around 25% (seven clusters) in other governorates (four in Zarqa, two in Irbid, and one in Madaba).

Within clusters, participants were selected using a two-stage random sampling method, the first stage being households and the second stage being individuals within households. To select households within clusters, the random-walk method was employed whereby starting points and walking directions were randomly chosen within clusters (see Figure 5.1 for an example of a cluster map used for sampling in Jordan). Although the random-walk method is more prone to bias than other sampling techniques [292], this was the only feasible method in which to select households, as there was no list available of households within clusters. Individuals were then randomly selected within chosen households through use of a Kish Table [293], which involves listing all members of the household who are eligible for inclusion into the study (in this case all members who were at least 18 years old), and then selecting one of them using a random-number table. Participants were only included if they had entered Jordan in 2003 or later (i.e. after the USA-led invasion to Iraq), to ensure that participants had experience of the kind of settings for which the HESPER Scale was being developed.

Figure 5.1 Example cluster map used for sampling during field-testing in Jordan

In Haiti, three displacement camps were purposively selected as study sites to provide information for the implementing agency's (IMC's) future programmes, and since sampling across the 1,300 displacement camps that existed at the time of the study was not feasible due to a lack of resources. Although purposive sampling is generally inferior to random sampling within quantitative research in drawing a representative sample [65] (see Sections 2.3.4 and 4.4.2 for further details), it was ensured that the camps varied in size and location to facilitate a wide participant group.

Similar to sampling methods in Jordan, within camps participants were selected using a two-stage systematic random sampling method, with households as first stage, and individuals within households as second stage. As there was no reliable list available of households within camps, the only feasible method was to choose households within camps according to the random-walk method using randomly selected intervals between households based on a rough estimate of camp size (i.e. number of households within the camp). Cluster sampling techniques were not appropriate due to the relatively small size of the camps. The centres of camps or the centres of separate blocks within camps were chosen as starting points, and a walking direction randomly selected. Estimates for camp sizes (1070 households for Pinchinat camp, 560 for Bolosse camp, and 303 for Champs de Mars camp) were obtained from the International Organization for Migration (IOM), which is the leading inter-governmental organization for migration [294]. As was the case in Jordan, individuals within households were selected using a random-number Kish Table [293]. Participants were included if they were at least 18 years of age.

In Nepal, Beldangi-II camp was selected as study site, as it is the largest camp of Bhutanese refugees in Nepal. Simple random sampling methods were employed to recruit participants within the camp; a list of randomly selected Bhutanese refugees living in Beldangi-II camp was obtained from the United Nations High Commissioner for Refugees (UNHCR) [52], and adult participants (i.e. refugees

who were at least 18 years of age) were randomly selected from this list. This method was chosen, as it is the most accurate yet simple sampling technique in drawing a representative sample in settings where a complete list of all individuals or households within a population is available [57, 292].

Data collection

Interviews for data collection (i.e. for 'Phase 3' of the project overall; also see Chapter 6) with 269 participants in Jordan and Nepal each, and 279 in Haiti, were conducted in Jordan over eight working days between 6th and 14th July 2010; in Haiti over eight working days between 22nd September and 1st October 2010; and in Nepal over 17 working days between 10th October and 4th November 2010.

Participants were interviewed by the local interviewers in one-to-one assessments in their own homes/shelters in Arabic in Jordan, Haitian Creole in Haiti, and Nepali in Nepal (with data being translated into English following interviews). Participants met with interviewers on either one or two occasions in Jordan and Nepal, and on one occasion in Haiti (as test-retest reliability was not assessed in this setting; see below). Interviewers were supervised by one or more local team leader; they met with supervisors at the end of each day in all three field-sites to discuss any potential problems, and for supervisors to check that the project materials had been completed correctly. The author silently observed a number of interviews in each of the three settings (with help of a translator), to ensure that the interview protocol was adhered to, and that interviews were conducted to a high standard.

During their first meeting with interviewers, after giving their voluntary informed consent to take part in the study (see 'Ethics' section above), all participants were administered the HESPER Scale [295] (see Appendix A3 for HESPER Scale; see Sections 3.5 and 4.4.2 for further details on how the scale is administered), followed by the WHOQOL-100 [271] (77 participants in Jordan, 79 in Haiti, and

269 in Nepal; see Appendix D3 for WHOQOL-100) and GHQ-12 [272] (all participants) to assess criterion (concurrent) validity of the HESPER Scale. To assess the HESPER Scale's inter-rater reliability, for 46 participants in Jordan, 44 in Haiti, and 42 in Nepal a second interviewer silently observed the interview and made ratings on an additional copy of the HESPER Scale based on participants' responses.

To assess test-retest reliability of the HESPER Scale, all participants in Jordan and Nepal were given the option to take part in a second interview, and a sub-sample of those who agreed to this were randomly selected for this. Participants in Haiti did not take part in a second interview due to test-retest reliability not being assessed in Haiti, as it was considered too burdensome for local people in this intense humanitarian setting.

During the second meeting with interviewers, 70 and 73 participants in Jordan and Nepal respectively were administered the HESPER Scale a second time under the same conditions around one week after the first interview by the same interviewer who had interviewed them previously. The period of one week between the two interviews was chosen, as this was considered long enough for participants not to remember all their original responses, but not so long that many participants' circumstances would have been likely to have changed; this was consistent with previous suggestions in the literature on a suitable time period [106, 296]. To ensure that participants who were included in the test-retest analyses had not had a change in their circumstances which could account for any differences in responses, before the HESPER Scale was re-administered, participants were asked whether there had been a change in any of their circumstances. A simple 'Yes'/'No' format was employed for this. If participants responded affirmatively, they were asked to briefly describe their change in circumstance.

Participants were thanked at the end of interviews, were given the opportunity to ask any questions, and were provided with the contact details of the local collaborating agencies in each of the three field-sites. In Jordan, participants were also given an information brochure with support organisations available to them.

Analyses

All data analyses were performed in SPSS 15.0 [243] and SPSS 17.0 [297] by the author. Data were entered into SPSS by the author in Jordan and Haiti, and by a research assistant in Nepal; entered data were double-checked by the author in all three settings to ensure accuracy, i.e. it was checked twice that the data had been entered into SPSS correctly, and translated data were also checked against the original Arabic, Haitian Creole and Nepali versions.

To gain an overview of the data, simple counts and prevalence rates were calculated for categorical demographic variables (i.e. sex, marital status, level of education, and religion). Means and standard deviations were computed for continuous demographic variables (i.e. age, number of children, and number of years displaced), as well as for time taken to administer the HESPER Scale, the time period between interviews 1 and 2 (test-retest), and the number of consistent priority ratings given across raters and time points.

To assess inter-rater reliability and test-retest reliability of total number of unmet needs on the HESPER Scale, intra-class correlation coefficients (ICCs) (absolute agreement) were calculated. Apart from this overall need score, it was also important to measure the psychometric properties of individual HESPER items, as in humanitarian settings individual item scores are arguably more useful as indicators of perceived needs which can be addressed by aid agencies than the total number of unmet needs score. Percentage agreements and Cohen's kappas were therefore calculated to assess inter-rater reliability and test-retest reliability of need ratings and priority ratings of individual HESPER

items [103]. For inter-rater reliability and test-retest reliability of priority ratings, priority ratings were combined into one response, i.e. whether the item had been rated as one of participants' three most serious problems, rather than whether the item was considered to be either the first, second or third most serious problem. For test-retest reliability statistics of need ratings and priority ratings, participants who reported some change in their condition were excluded from the analyses, to ensure that test-retest reliability was assessed with the same sample under the same conditions who had not had a change in their circumstances. Cronbach's alphas [266] were computed to measure internal consistency of the HESPER Scale.

To measure criterion (concurrent) validity of the HESPER Scale, the Pearson's correlation coefficient was calculated to measure the association between total number of unmet needs on the HESPER Scale and the total WHOQOL-100 score; point-biserial correlation coefficients were calculated for associations between individual HESPER items and selected related questions from the WHOQOL-100, as well as between the HESPER Scale's 'Distress' item and total GHQ-12 score. Predictions were made for correlation coefficients prior to field-testing of the HESPER Scale, and results were compared to these. '0' ('no need') and '9' ('not known/not applicable/answer refused') ratings were combined into one rating for the internal consistency and criterion validity analyses, to avoid large numbers of missing values (see Section 4.4.2 for further details on the justification of combining '0' and '9' ratings).

5.3 Results

Respondents

Table 5.1 shows the socio-demographic characteristics of participants in the three field-sites during 'Phase 3' of the HESPER project. A sub-sample of these participants was employed for psychometric field-testing of the HESPER Scale,

the results of which are presented in this chapter (see 'Design' section above; see Chapter 6 for results on the other part of the study).

The samples varied considerably across the three sites in terms of age (the Haiti and Nepal samples were younger than the Jordan sample), marital status (far fewer participants were married in Haiti than in the other two sites), level of education (participants in Jordan were more educated than in the other two sites), religion (Islam was the main religion in the Jordan sample, Christianity in the Haiti sample, and Hinduism and – to a lesser extent – Buddhism in the Nepal sample), and time displaced (participants in Haiti had been displaced the shortest, those in Nepal the longest). In Haiti, men were underrepresented, constituting only 17.9% of participants.

Response rates of people who were invited to participate were 55.1% in Jordan, 95.0% in Haiti, and 80.0% in Nepal; the response rate across the three sites was 73.1%. The relatively low response rate in Jordan was anticipated prior to the study, as the displaced Iraqi population in Jordan had previously already been exposed to a multitude of surveys, resulting in a low willingness to participate in further surveys, and as many of them also displayed high levels of fear and mistrust, for example due to their fear of deportation [253, 298].

Table 5.1 Demographic characteristics of study participants in the three field-sites

	Total (n=817)	**Jordan (n=269)**	**Haiti (n=279)**	**Nepal (n=269)**
Sex, no. (%)				
Men	305 (37.3%)	116 (43.1%)	50 (17.9%)	139 (51.7%)
Women	512 (62.7%)	153 (56.9%)	229 (82.1%)	130 (48.3%)
Mean age in years	37.09	40.24	34.22	36.92
	(SD=13.5)	(SD=13.36)	(SD=12.31)	(SD=14.15)
Marital status, no. (%)				
Married	441 (54.0%)	191 (71.0%)	33 (12.0%)	217 (80.7%)
Unmarried	335 (41.0%)	56 (20.8%)	229 (82.1%)	50 (18.6%)
Widowed	18 (2.2%)	16 (5.9%)	2 (0.7%)	0
Divorced/separated	8 (1.0%)	6 (2.2%)	0	2 (0.7%)
Cohabiting	11 (1.3%)	0	11 (4.0%)	0
Mean number of children	2.37	2.11	2.59	2.39
	(SD=2.17)	(SD=1.95)	(SD=2.14)	(SD=2.37)
Level of education[1], no. (%)				
Illiterate/no formal education	164 (20.1%)	7 (2.6%)	49 (17.7%)	108 (40.1%)
Primary school	190 (23.3%)	29 (10.8%)	98 (35.4%)	63 (23.4%)
Secondary school	315 (38.6%)	104 (38.7%)	122 (44.0%)	89 (33.1%)
University	146 (17.9%)	129 (48.0%)	8 (2.9%)	9 (3.3%)
Religion, no. (%)				
Christian	329 (40.3%)	45 (16.7%)	268 (96.1%)	16 (5.9%)
Muslim	221 (27.1%)	221 (82.2%)	0	0
Hindu	178 (21.8%)	0	0	178 (66.2%)
Buddhist	52 (6.4%)	0	0	52 (19.3%)
Other religion[2]	27 (3.3%)	3 (1.1%)	1 (0.4%)	23 (8.6%)
No religion	5 (0.6%)	0	5 (1.8%)	0
Mean no. of years displaced	7.77	3.84	0.67	18.95
	(SD=8.09)	(SD=2.18)	(SD=0.06)	(SD=0.93)

Numbers do not always add up to total number of participants due to missing data.
Please note that this is an overview of all participants interviewed in 'Phase 3' of the HESPER project. The psychometric properties of the HESPER Scale (inter-rater reliability and test-retest reliability, and criterion (concurrent) validity) were assessed with a sub-sample of these participants.

[1] Primary school is grades 1 – 6; secondary school is grades 7 – 12.

[2] Other religions included Kirat, Sanatan, Biswasi, Manab, Nastak (Nepal), Haba'i, Sa'aebiya (Jordan), and Voodoo (Haiti).

Time to complete

Data collection (between 330 and 385 interviews per country) took between 12 and 22 working days (using 12 and six interviewers respectively) in each of the three field-sites, including time spent on training interviewers.

On average (mean figures), the HESPER Scale took 14.8 (SD=4.1) minutes to complete in Jordan, 21.3 (SD=11.5) minutes in Haiti, and 22.0 (SD=6.0) minutes in Nepal; across sites the mean was 19.5 minutes (SD=8.7).

HESPER Scale – Psychometric results

Inter-rater reliability

ICCs (absolute agreement) for inter-rater reliability of total number of unmet needs on the HESPER Scale were 0.998 in Jordan, 0.986 in Haiti, and 0.995 in Nepal; across sites it was 0.998.

Table 5.2 displays percentage agreements and Cohen's kappas for inter-rater reliability of need ratings of individual HESPER items. Percentage agreements ranged between 93.2% and 100% across the three field-sites, and Cohen's kappas ranged between 0.66 and 1.0 (with 97.4% of items for which kappas could be calculated having kappas of over 0.8 across the three sites).

Table 5.3 on pages 201 to 202 shows percentage agreements and Cohen's kappas for inter-rater reliability of priority ratings of individual HESPER items. Percentage agreements ranged between 97.6% and 100% across the three sites, and Cohen's kappas ranged between 0.66 and 1.0 (with all but one item, 98.3%, having kappas of over 0.9 across the three sites, for those items for which kappas could be calculated). The mean number of priority ratings that raters agreed on was 3.0 (SD=0) in Jordan, 3.0 (SD=0) in Haiti, and 2.95 (SD=0.22) in Nepal; across sites it was 2.98 (SD=0.12) (out of a possible 3.0).

Table 5.2 Percentage agreements and Cohen's kappas for inter-rater reliability of need ratings of individual HESPER items in the three field-sites

	Total (n=132)		Jordan (n=46)		Haiti (n=44)		Nepal (n=42)	
HESPER items[1]	**% agreement**	**Cohen's kappa**	**% agreement**	**Cohen's kappa**	**% agreement**	**Cohen's kappa**	**% agreement**	**Cohen's kappa**
1. Drinking water	99.2	0.98	100	1.0	97.7	0.94	100	1.0
2. Food	98.5	0.97	97.8	0.94	97.7	0.79	100	1.0
3. Place to live in	99.2	0.98	97.8	0.96	100	N/A[2]	100	1.0
4. Toilets	97.7	0.95	97.8	0.94	95.3	0.89	100	1.0
5. Keeping clean	99.2	0.99	100	1.0	100	1.0	97.7	0.95
6. Clothing, shoes, bedding or blankets	99.2	0.98	100	1.0	100	1.0	97.7	0.95
7. Income or Livelihood	100	1.0	100	1.0	100	1.0	100	1.0
8. Physical health	98.5	0.97	100	1.0	97.7	0.95	97.7	0.95
9. Health care	97.7	0.96	97.8	0.96	95.5	0.88	100	1.0
10. Distress	100	1.0	100	1.0	100	1.0	100	1.0
11. Safety	100	1.0	100	1.0	100	1.0	100	1.0
12. Education for your children	96.2	0.94	95.7	0.93	97.7	0.95	95.1	0.85
13. Care for family members	96.2	0.93	93.5	0.89	95.5	N/A[2]	100	1.0
14. Support from others	100	1.0	100	1.0	100	1.0	100	1.0
15. Separation from family members	100	1.0	100	1.0	100	1.0	100	1.0
16. Being displaced from home	100	1.0	100	1.0	100	1.0	100	1.0

17. Information	98.5	0.97	100	1.0	97.7	0.66	97.7	0.93
18. Aid	99.2	0.98	97.8	0.95	100	1.0	100	1.0
19. Respect	99.2	0.98	97.8	0.92	100	1.0	100	1.0
20. Moving between places	97.7	0.95	97.8	0.95	95.5	0.89	100	1.0
21. Too much free time	99.2	0.98	100	1.0	100	1.0	97.7	0.94
22. Law and justice in your community	99.2	0.99	100	1.0	97.7	0.92	100	1.0
23. Safety or protection from violence for women in your community	97.0	0.94	97.8	0.95	93.2	0.84	100	1.0
24. Alcohol or drug use in your community	98.5	0.97	100	1.0	95.5	0.88	100	1.0
25. Mental illness in your community	97.7	0.96	100	1.0	93.2	0.89	100	1.0
26. Care for people in your community who are on their own	99.2	0.99	100	1.0	97.7	0.83	100	1.0
Residency (Jordan only)[3]	N/A	N/A	100	1.0	N/A	N/A	N/A	N/A
Burying and mourning the dead in your community (Haiti only)[3]	N/A	N/A	N/A	N/A	95.5	0.87	N/A	N/A

Items are listed according to the order in which they appeared in the version of the HESPER Scale used during field-testing, together with their item numbers.

[1] See Appendix A3 for item questions.

[2] Not possible to compute Cohen's kappa for this item, as ratings for at least one of the variables was a constant.

[3] In Jordan and Haiti, an additional item was included based on findings made during previous pilot-testing of the draft HESPER Scale (Jordan), and on field-observations (Haiti) (see 'Procedure' section for further details).

Table 5.3 Percentage agreements and Cohen's kappas for inter-rater reliability of priority ratings of individual HESPER items across the three field-sites, i.e. whether items were rated as one of participants' three most serious problems

	Total (n=132)		Jordan (n=46)		Haiti (n=44)		Nepal (n=42)	
HESPER items[1]	**% agreement**	**Cohen's kappa**	**% agreement**	**Cohen's kappa**	**% agreement**	**Cohen's kappa**	**% agreement**	**Cohen's kappa**
1. Drinking water	100	1.0	100	1.0	100	1.0	100	1.0
2. Food	100	1.0	100	N/A[2]	100	1.0	100	1.0
3. Place to live in	100	1.0	100	1.0	100	1.0	100	1.0
4. Toilets	100	1.0	100	1.0	100	1.0	100	1.0
5. Keeping clean	100	1.0	100	N/A[2]	100	N/A[2]	100	1.0
6. Clothing, shoes, bedding or blankets	99.2	0.96	100	1.0	100	N/A[2]	97.6	0.94
7. Income or Livelihood	99.2	0.99	100	1.0	100	1.0	97.6	0.93
8. Physical health	99.2	0.97	100	1.0	100	1.0	97.6	0.94
9. Health care	100	1.0	100	1.0	100	1.0	100	1.0
10. Distress	100	1.0	100	1.0	100	1.0	100	1.0
11. Safety	100	1.0	100	1.0	100	1.0	100	1.0
12. Education for your children	100	1.0	100	1.0	100	1.0	100	1.0
13. Care for family members	99.2	0.92	100	1.0	100	1.0	97.6	0.66
14. Support from others	100	N/A[2]	100	N/A[2]	100	N/A[2]	100	N/A[2]
15. Separation from family members	100	1.0	100	1.0	100	1.0	100	1.0
16. Being displaced from home	100	1.0	100	1.0	100	N/A[2]	100	1.0

17. Information	100	1.0	100	1.0	100	1.0	100	N/A[2]
18. Aid	100	1.0	100	1.0	100	N/A[2]	100	1.0
19. Respect	100	N/A[2]	100	N/A[2]	100	N/A[2]	100	N/A[2]
20. Moving between places	100	1.0	100	1.0	100	1.0	100	1.0
21. Too much free time	100	1.0	100	1.0	100	1.0	100	1.0
22. Law and justice in your community	100	N/A[2]	100	N/A[2]	100	N/A[2]	100	N/A[2]
23. Safety or protection from violence for women in your community	100	1.0	100	N/A[2]	100	1.0	100	1.0
24. Alcohol or drug use in your community	100	1.0	100	1.0	100	N/A[2]	100	1.0
25. Mental illness in your community	100	1.0	100	1.0	100	N/A[2]	100	1.0
26. Care for people in your community who are on their own	100	1.0	100	N/A[2]	100	N/A[2]	100	1.0
Residency (Jordan only)[3]	N/A	N/A	100	1.0	N/A	N/A	N/A	N/A
Burying and mourning the dead in your community (Haiti only)[3]	N/A	N/A	N/A	N/A	100	1.0	N/A	N/A

Items are listed according to the order in which they appeared in the version of the HESPER Scale used during field-testing, together with their item numbers.

[1] See Appendix A3 for item questions.

[2] Not possible to compute Cohen's kappa for this item, as ratings for at least one of the variables was a constant.

[3] In Jordan and Haiti, an additional item was included based on findings made during previous pilot-testing of the draft HESPER Scale (Jordan), and on field-observations (Haiti) (see 'Procedure' section for further details).

Test-retest reliability

Re-test interviews for the HESPER Scale were conducted between six and eight days following the first interview in Jordan, and between five and eight days later in Nepal; the means were 6.9 days (SD=0.3) and 6.5 days (SD=0.8) in the two countries respectively.

In Jordan, 11 (15.7%) participants were excluded from the test-retest analyses, and nine (12.5%) participants in Nepal, due to them having reported some change in their condition. 59 participants in Jordan, and 63 in Nepal, were therefore included in the test-retest analyses.

ICCs (absolute agreement) for test-retest reliability of total number of unmet needs on the HESPER Scale were 0.961 in Jordan and 0.773 in Nepal; across the two sites it was 0.907.

Table 5.4 shows percentage agreements and Cohen's kappas for test-retest reliability of need ratings of individual HESPER items in Jordan and Nepal. Percentage agreements ranged between 66.7% and 100% across the two sites, and Cohen's kappas ranged between 0.07 and 1.0 (with 56.6% of items having kappas of over 0.6).

Table 5.5 on pages 206 to 207 displays percentage agreements and Cohen's kappas for test-retest reliability of priority ratings of individual HESPER items in Jordan and Nepal. Percentage agreements ranged between 58.7% and 100% across the two sites, and Cohen's kappas ranged between -0.05 and 1.0 (with 52.3% of items having kappas of over 0.6, for those items for which kappas could be calculated). The mean number of priority ratings that were consistently given at the two time points were 2.4 (SD=0.71) in Jordan and 1.33 (SD=0.79) in Nepal; across the two sites the mean was 1.86 (SD=0.92) (out of a possible 3.0).

Table 5.4 Percentage agreements and Cohen's kappas for test-retest reliability of need ratings of individual HESPER items during field-testing in Jordan and Nepal

HESPER items[1]	Total (n=122)		Jordan (n=59)		Nepal (n=63)	
	% agreement	Cohen's kappa	% agreement	Cohen's kappa	% agreement	Cohen's kappa
1. Drinking water	91.7	0.82	94.9	0.89	88.7	0.17
2. Food	82.8	0.66	94.9	0.9	71.4	0.43
3. Place to live in	82.8	0.66	93.2	0.86	73.0	0.43
4. Toilets	85.2	0.63	94.9	0.88	76.2	0.39
5. Keeping clean	84.4	0.64	88.1	0.73	81.0	0.55
6. Clothing, shoes, bedding or blankets	83.6	0.67	96.6	0.93	71.4	0.43
7. Income or Livelihood	91.8	0.73	100	1.0	84.1	0.6
8. Physical health	80.2	0.6	89.8	0.77	71.0	0.38
9. Health care	87.7	0.75	91.5	0.8	84.1	0.49
10. Distress	85.2	0.7	94.9	0.81	76.2	0.39
11. Safety	85.2	0.56	89.8	0.71	81.0	0.42
12. Education for your children	90.2	0.8	96.6	0.94	84.1	0.56
13. Care for family members	85.1	0.72	93.2	0.89	77.4	0.45
14. Support from others	93.4	0.86	93.2	0.86	93.7	0.47
15. Separation from family members	85.2	0.68	96.6	0.86	74.6	0.49
16. Being displaced from home	86.8	0.65	100	1.0	74.2	0.49

17. Information	80.3	0.52	84.7	0.69	74.6	0.07
18. Aid	87.7	0.77	94.9	0.85	81.0	0.38
19. Respect	91.8	0.78	93.2	0.86	90.5	0.61
20. Moving between places	85.2	0.64	93.2	0.85	77.8	0.39
21. Too much free time	79.5	0.59	93.2	0.86	66.7	0.26
22. Law and justice in your community	80.3	0.61	83.1	0.68	77.8	0.53
23. Safety or protection from violence for women in your community	85.2	0.67	94.9	0.89	76.2	0.43
24. Alcohol or drug use in your community	85.2	0.71	93.2	0.84	77.8	0.54
25. Mental illness in your community	89.3	0.79	91.5	0.85	87.3	0.62
26. Care for people in your community who are on their own	80.3	0.63	86.4	0.76	74.6	0.46
Residency (Jordan only)[3]	N/A	N/A	96.6	0.92	N/A	N/A

Items are listed according to the order in which they appeared in the version of the HESPER Scale used during field-testing, together with their item numbers.

Participants who reported some change in their condition were excluded from the analyses.

Test-retest reliability was not measured in Haiti, as it was not considered appropriate in this setting.

[1] See Appendix A3 for item questions.

[2] In Jordan, an additional item was included based on findings made during previous pilot-testing of the draft HESPER Scale (see 'Procedure' section for further details).

Table 5.5 Percentage agreements and Cohen's kappas for test-retest reliability of priority ratings of individual HESPER items during field-testing in Jordan and Nepal, i.e. whether items were rated as one of participants' three most serious problems

	Total (n=122)		Jordan (n=59)		Nepal (n=63)	
HESPER items[1]	**% agreement**	**Cohen's kappa**	**% agreement**	**Cohen's kappa**	**% agreement**	**Cohen's kappa**
1. Drinking water	97.5	0.76	100	1.0	95.2	N/A[2]
2. Food	83.6	0.47	96.6	0.82	71.4	0.28
3. Place to live in	87.7	0.62	94.9	0.84	81.0	0.42
4. Toilets	94.3	0.34	100	1.0	88.9	0.17
5. Keeping clean	95.1	-0.03	100	N/A[2]	90.5	-0.05
6. Clothing, shoes, bedding or blankets	83.6	0.09	98.3	N/A[2]	69.8	0.04
7. Income or Livelihood	73.8	0.47	89.8	0.79	58.7	0.18
8. Physical health	84.4	0.54	93.2	0.78	76.2	0.37
9. Health care	92.6	0.69	88.1	0.66	96.8	0.65
10. Distress	92.6	0.44	96.6	0.73	88.9	0.18
11. Safety	95.1	0.48	98.3	0.79	92.1	0.25
12. Education for your children	96.7	N/A[2]	100	N/A[2]	93.7	N/A[2]
13. Care for family members	95.1	0.48	94.9	-0.02	95.2	0.64
14. Support from others	100	1.0	100	1.0	100	N/A[2]
15. Separation from family members	82.8	0.33	91.5	0.57	74.6	0.18
16. Being displaced from home	85.2	0.35	93.2	0.68	77.8	0.1

17. Information	100	1.0	100	1.0	100	N/A[2]
18. Aid	93.4	0.68	89.8	0.71	96.8	-0.02
19. Respect	80.3	0.1	100	1.0	95.2	-0.02
20. Moving between places	96.7	0.48	100	1.0	93.7	0.3
21. Too much free time	93.4	0.52	94.9	0.64	92.1	0.42
22. Law and justice in your community	98.4	0.74	100	1.0	96.8	0.65
23. Safety or protection from violence for women in your community	95.9	0.42	100	N/A[2]	92.1	0.4
24. Alcohol or drug use in your community	92.6	0.49	100	N/A[2]	85.7	0.45
25. Mental illness in your community	97.5	0.56	100	1.0	95.2	-0.02
26. Care for people in your community who are on their own	96.7	0.48	100	1.0	93.7	0.3
Residency (Jordan only)[3]	N/A	N/A	94.9	0.89	N/A	N/A

Items are listed according to the order in which they appeared in the version of the HESPER Scale used during field-testing, together with their item numbers.

Participants who reported some change in their condition were excluded from the analyses.

Test-retest reliability was not measured in Haiti, as it was not considered appropriate in this setting.

[1] See Appendix A3 for item questions.

[2] Not possible to compute Cohen's kappa for this item, as ratings for at least one of the variables was a constant.

[3] In Jordan, an additional item was included based on findings made during previous pilot-testing of the draft HESPER Scale (see 'Procedure' section for further details).

As test-retest reliability results in Nepal were lower overall than all other reliability results across the three field-sites, brief interviews were conducted with 12 participants in Nepal following re-test interviews, during which they were asked for reasons of why they may have responded differently at interviews 1 and 2. Reasons given included:

- They believed the collaborating agency would be more likely to offer them support if they mentioned a wide range of different problems during the two interviews (n=7).
- They had been experiencing some tensions in one of the interviews, for instance because family members had been resettled (n=5).
- They were old, or had low levels of understanding or listening skills (n=3).
- Discussions with family members following the first interview led them to respond differently during the second interview (n=3).

Internal consistency

Cronbach's alphas for the HESPER Scale were 0.89 in Jordan, 0.68 in Haiti, and 0.8 in Nepal; across the three settings it was 0.93.

Criterion (concurrent) validity

Total number of unmet needs on the HESPER Scale correlated with the total WHOQOL-100 score as was predicted before data collection in all three settings (Jordan: r =-0.63, p<.0005; Haiti: r =-0.42, p=.001; Nepal: r =-0.47, p<.0005; where a medium to large negative (i.e. -0.3 – -1.0) correlation had been predicted), as well as with the WHOQOL-100 question 'How would you rate your quality of life?' (Jordan: r =-0.5, p<.0005; Haiti: r =-0.3, p=.009; Nepal: r =-0.29, p<.0005; where a medium negative (i.e. -0.3 – -0.5) correlation had been predicted).

Table 5.6 shows the point-biserial correlations between individual HESPER items and related WHOQOL-100 questions, and the GHQ-12 for one HESPER item ('Distress'). For 11 HESPER items, no external criterion was available. For six of the 15 HESPER items for which there was an external criterion available, more than one criterion was used (i.e. there was more than one relevant WHOQOL-100 question).

36 of the 67 (53.7%) computed correlations across the three field-sites were as was predicted prior to field-testing of the HESPER Scale, and a further 24 (35.8%) correlations were within one order-of-magnitude step of the predicted value range (where a correlation of between 0.1 and 0.3 denoted a low correlation, between 0.3 and 0.5 denoted a medium correlation, and between 0.5 and 1.0 denoted a large correlation; see Table 5.6). 7 (10.4%) correlations across the three field-sites were more than one order-of-magnitude step away from the value range that was predicted before field-testing of the HESPER Scale. In Haiti, these included the HESPER items 'Income or livelihood' (for which there were two validators) and 'Distress' (for which there were three validators); for these two items validation was compromised however, as the items were rated as unmet need by over 90.0% of participants (i.e. there was limited variability and power). In Nepal, they included the items 'Aid' (for one of the two validators), and 'Moving between places' (for one of the three validators). In Jordan, all correlations were roughly as was predicted before field-testing of the HESPER Scale, i.e. were within one order-of-magnitude step of the value range that was predicted prior to field-testing of the scale (see Table 5.6).

Table 5.6 Individual HESPER items with their corresponding external criterion questions from the WHOQOL-100 and GHQ-12, as well as the correlations that were predicted prior to field-testing of the HESPER Scale, and the actual correlations found in the three field-sites

			Actual correlations (Pearson's r)[2]		
HESPER items	**External criterion questions**	**Predicted correlations**[1]	**Jordan (n=77)**	**Haiti (n=79)**	**Nepal (n=269)**
3. Place to live in Do you have a serious problem because you do not have an adequate place to live in?	How satisfied are you with the conditions of your living place?	medium to large (negative)	-0.33 (p=.004)	N/A[3]	*-0.21 (p=.001)*
7. Income or Livelihood[4] Do you have a serious problem because you do not have enough income, money or resources to live?	Have you enough money to meet your needs?	medium to large (negative)	-0.65 (p<.0005)	**0.03 (p=.772)**[5]	-0.36 (p<.0005)
	How satisfied are you with your capacity to work?	low (negative)	-0.13 (p=.276)	**0.24 (p=.034)**[5]	-0.14 (p=.026)
8. Physical health Do you have a serious problem with your physical health; for example, because you have a physical illness, injury or disability?	How satisfied are you with your health?	medium (negative)	*-0.61 (p<.0005)*	-0.46 (p<.0005)	-0.48 (p<.0005)
9. Health care Do you have a serious problem because you are not able to get adequate health care for yourself; for example treatment or medicines (*for women:* or health care during pregnancy or childbirth)?	How satisfied are you with your access to health services?	low to medium (negative)	-0.44 (p<.0005)	*-0.59 (p<.0005)*	-0.36 (p<.0005)

10. Distress[4] Do you have a serious problem because you feel very distressed; for example, very upset, sad, worried, scared or angry?	How much do you enjoy life?	low (negative)	*-0.33 (p=.004)*	**0.06 (p=.609)**[5]	-0.19 (p=.002)
	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	medium (positive)	0.47 (p<.0005)	**0.08 (p=.504)**[5]	0.37 (p<.0005)
	GHQ-12 total score	medium (positive)	*0.52 (p<.0005)*	**0.05 (p=.401)**[5]	*0.28 (p<.0005)*
11. Safety[4] Do you have a serious problem because you or your family are not safe or protected where you live now; for example because of conflict, violence or crime in your community, city or village?	How safe do you feel in your daily life?	medium (negative)	-0.3 (p=.009)	-0.3 (p=.007)	*-0.19 (p=.001)*
	Do you feel you are living in a safe and secure environment?	medium (negative)	-0.38 (p=.001)	*-0.23 (p=.042)*	-0.3 (p<.0005)
13. Care for family members Do you have a serious problem because in your situation it is difficult to care for family members who live with you; for example young children in your family; or family members who are elderly, disabled or ill?	How satisfied are you with your ability to provide for or support others?	low (negative)	*-0.05 (p=.681)*	*-0.01 (p=.967)*[5]	*-0.06 (p=.308)*

14. Support from others Do you have a serious problem because you are not getting enough support from people in your community; for example, emotional support or practical help?	WHOQOL-100 Social Support Facet; combined score of the following questions: Do you get the kind of support from others that you need? To what extent can you count on your friends when you need them? How satisfied are you with the support you get from your family? How satisfied are you with the support you get from your friends?	low (negative)	-0.24 (p=.04)	*-0.06 (p=.612)*[5]	*-0.36 (p<.0005)*
15. Separation from family members Do you have a serious problem because you are separated from family members?	How alone do you feel in your life?	low (positive)	*0.31 (p=.006)*	0.1 (p=.374)[5]	*0.08 (p=.224)*
17. Information[4] Do you have a serious problem because you do not have enough information; for example information about the situation in which you live now; or the situation in your home country, city or village?	How available to you is the information that you need in your day-to-day life?	low (negative)	*-0.45 (p<.0005)*	-0.19 (p=.091)[5]	-0.1 (p=.096)
	To what extent do you have opportunities for acquiring the information that you feel you need?	low (negative)	*-0.37 (p=.001)*	-0.11 (p=.319)[5]	*-0.04 (p=.552)*

18. Aid[4] Do you have a serious problem because of inadequate aid; for example because you do not have information about the aid that is available; because you do not have fair access to the aid that is available; or because aid agencies are working on their own without involvement from people in your community?	How available to you is the information that you need in your day-to-day life?	low (negative)	-0.22 (p=.063)	-0.17 (p=.134)[5]	**0.02 (p=.806)**
	To what extent do you have opportunities for acquiring the information that you feel you need?	low (negative)	-0.27 (p=.018)	-0.11 (p=.322)[5]	*-0.05 (p=.419)*
20. Moving between places[4] Do you have a serious problem because you are not able to move between places; for example going to another village or town?	How satisfied are you with your transport?	low (negative)	*-0.31 (p=.006)*	*-0.41 (p<.0005)*	-0.17 (p=.006)
	How well are you able to get around?	low (negative)	-0.3 (p=.008)	*-0.04 (p=.763)*	**0.02 (p=.811)**
	How safe do you feel in your daily life?	low (negative)	-0.22 (p=.059)	-0.21 (p=.064)	-0.1 (p=.106)
21. Too much free time Do you have a serious problem because you have too much free time in the day?	WHOQOL-100 Recreational Leisure Activities facet; combined score of the following questions: How much do you enjoy your free time? To what extent do you have the opportunity for leisure activities? How satisfied are you with the way you spend your spare time?	low (negative)	*-0.44 (p<.0005)*	-0.11 (p=.346)[5]	-0.25 (p<.0005)

23. Safety or protection from violence for women in your community Is there a serious problem for women in your community because of physical or sexual violence towards them; either in the community or in their homes?	Do you feel you are living in a safe and secure environment?	low (negative)	-0.13 (p=.25)	-0.24 (p=.033)	-0.21 (p<.0005)
26. Care for people in your community who are on their own Is there a serious problem in your community because there is not enough care for people who are on their own; for example unaccompanied children, widows or elderly people; or unaccompanied people who have a physical or mental illness, or disability?	How satisfied are you with the social care services?	low (negative)	-0.21 (p=.07)	N/A[6]	*-0.02 (p=.75)*

[1] Low correlation = 0.1 – 0.3; medium correlation = 0.3 – 0.5; large correlation = 0.5 – 1.

[2] Correlations stated in normal font were as was predicted prior to field-testing of the HESPER Scale; those stated in italics were within one order-of-magnitude step of the predicted value range; those stated in bold were more than one order-of-magnitude step away from the predicted value range.

[3] Not possible to compute Pearson's r for this item, as ratings for at least one of the variables was a constant.

[4] Some HESPER items have two or more values for criterion validity; this is due to multiple questions having being employed as validators for the item.

[5] Validation was compromised for this HESPER item, as it was rated as unmet need by at least 90.0% of participants (i.e. limited variability and power).

[6] The relevant question from the WHOQOL-100 was not included in Haiti, as it was not considered an appropriate question in this setting.

5.4 Finalization of HESPER Scale

Table 5.7 shows changes that were made to eight HESPER items to finalize the HESPER Scale following its field-testing in Jordan, Haiti and Nepal. These revisions were based in part on advice by the 'Plain English Campaign' [221], which was contracted to review the HESPER Scale and its accompanying interviewers' training manual in preparation for their publication. Most changes involved very small revisions in sentence structures, wordings and punctuations to simplify items. For three items ('Aid', 'Information', and 'Respect') slight changes were made to their content (see Table 5.7), based on observations during field-testing of the HESPER Scale that these items would benefit from being simplified or revised to ease their intelligibility for participants. The language used in the interviewers' training manual was also simplified based on the 'Plain English Campaign's' review.

Furthermore, the demographic variables included at the top of the HESPER Scale were reduced from nine to three variables; location, gender and age were retained, whilst marriage status, number of children, years of formal education, ethnicity, religion, and length of time of displacement were removed. The reasons for retaining only basic demographic variables in the scale were first that post-development the HESPER Scale was likely to be used primarily as part of a pack of assessment tools, during which demographic variables would likely be collected at the beginning of the overall assessment; and second that the demographic variables collected during an assessment will usually – at least in part – depend on the purpose of the assessment.

All revisions were made not only to the English-language version of the HESPER Scale, but also to the Arabic, Haitian Creole and Nepali versions that were used during field-testing of the scale in Jordan, Haiti and Nepal. Following its finalization, the HESPER Scale was also translated into French and Spanish by four contracted translators (two per language) using back-translation techniques (see section on the translation of materials above for further details on back-

translation methods), to ensure that the HESPER Scale was available for use in multiple languages following its publication. The translation process was coordinated by the author, who corresponded with the translators and checked all back-translations, to make sure that the translations were conducted to a high standard. All six language versions of the HESPER Scale are available through WHO (see HESPER manual in Appendix F3 for details); the English version was also published as part of the HESPER manual (see Section 5.5 below).

Table 5.7 Changes made to HESPER items following field-testing of the scale in Jordan, Haiti and Nepal

HESPER items (field-testing)	HESPER items (final scale)
2. Food Do you have a serious problem with food*; for* example because you do not have enough, or good enough, food; or because you are not able to cook food*?*	**2. Food** Do you have a serious problem with food*? For* example*,* because you do not have enough *food*[1], or good enough food*,* or because you are not able to cook food*.*
3. Place to live in Do you have a serious problem because you do not have *an adequate*[2] place to live in?	**3. Place to live in** Do you have a serious problem because you do not have *a suitable*[2] place to live in?
6. *Clothing*[2]*,* shoes, bedding or blankets Do you have a serious problem because you do not have enough, or good enough, *clothing*[2]*,* shoes, bedding or blankets?	**6. *Clothes*[2]*,* shoes, bedding or blankets** Do you have a serious problem because you do not have enough, or good enough, *clothes*[2]*,* shoes, bedding or blankets?
13. Care for family members Do you have a serious problem because in your situation it is difficult to care for family members who live with you*; for* example young children in your family*;* or family members who are elderly, disabled or ill*?*	**13. Care for family members** Do you have a serious problem because in your situation it is difficult to care for family members who live with you*? For* example*,* young children in your family*,* or family members who are elderly, *physically or mentally ill, or*[1] disabled*.*
17. Information Do you have a serious problem because you do not have enough information*; for* example information about the *situation in which you live now*[2]*;* or *the situation*[2] *in your home country, city or village*[2]*?*	**17. Information** *For displaced people:*[1] Do you have a serious problem because you do not have enough information*? For* example*, because you do not have enough*[1] information about the *aid that is available*[2]*;* or *because you do not have enough information about what is happening*[2] *in your home country or home town*[2]*.* *For non-displaced people:*[1] Do you have a serious problem because you do not have enough information*? For* example*, because you do not have enough*[1] *i*nformation about the *aid that is available*[2]*.*

18. Aid[2]	**18. *The way aid is provided[2]***
Do you have a serious problem because of inadequate aid*; for example because you do not have information about the aid that is available;[3]* because you do not have fair access to the aid that is available; or because aid agencies are working on their own without involvement from people in your community*?*	Do you have a serious problem because of inadequate aid*? For* example, because you do not have fair access to the aid that is available, or because aid agencies are working on their own without involvement from people in your community*.*
19. Respect	**19. Respect**
Do you have a serious problem because you do not feel respected or you feel humiliated*; for* example because of the situation *in which you live[2];* or because of the way *other[3]* people*, including aid workers,[3]* treat you*?*	Do you have a serious problem because you do not feel respected or you feel humiliated*? For* example*,* because of the situation *you are living in[2],* or because of the way people treat you*.*
26. Care for people in your community who are on their own	**26. Care for people in your community who are on their own**
Is there a serious problem in your community because there is not enough care for people who are on their own*; for* example unaccompanied children, widows or elderly people*;* or unaccompanied people who have a physical or mental illness, or disability*?*	Is there a serious problem in your community because there is not enough care for people who are on their own*? For* example*, care for[1]* unaccompanied children, widows or elderly people*,* or unaccompanied people who have a physical or mental illness, or disability*.*

Revisions are in italics.

Items are listed in the order in which they appeared in the HESPER Scale (both during field-testing of the scale, as well as in the finalised version), together with their item numbers.

[1] Added.

[2] Changed.

[3] Deleted.

5.5 Development and dissemination of HESPER manual

An 89-page HESPER manual was developed following the finalization of the HESPER Scale which was aimed at project leaders or supervisors wishing to learn how to conduct a needs assessment using the HESPER Scale (see Appendix F3 for HESPER manual). The manual was drafted by the author with substantial input from the main collaborator of the HESPER project at WHO, and was completed following a peer-review by members of the HESPER project's steering committee. The lay-out of the manual was then finalized ready for publication by a contracted designer. The author, as well as the main collaborator at WHO and the author's supervisor, were in close contact with the designer throughout this process, and made final decisions on the lay-out of the manual; photos from field-testing of the HESPER Scale in Haiti, provided by the author, were also included in the manual, alongside photos from other humanitarian settings.

The manual was designed to incorporate all information required to carry out a HESPER assessment. In addition to including the English version of the HESPER Scale and its accompanying interviewers' training manual, it contained descriptive sections on the HESPER Scale (including an overview of the scale; who may use the scale; the contexts in which it can be used; how the scale may be useful; how and why it was developed; the model it was based on; the scale's psychometric properties; and its final structure), as well as the overall HESPER assessment process, including procedures before, during and after interviews (such as sampling; sample size calculations; the recruitment and training of interviewers; the importance of informed consent and confidentiality; how to minimise non-response; safety issues; how to supervise interviewers; data entry, analyses and presentation; how to communicate results to stakeholders; how to conduct follow-up assessments; and how to address and monitor prioritised needs). An example HESPER report and participant information sheet were also included as appendices.

The manual was the main product of the HESPER project, and was published and disseminated through WHO in 2011 [167]. Following its completion, an electronic version of the manual was sent by email to a few hundred humanitarian experts, staff members of humanitarian organisations, and other relevant professionals by the main collaborator at WHO. The manual is freely available to download on the WHO website (see http://whqlibdoc.who.int/publications/2011/9789241548236_eng.pdf), as well as on websites of other humanitarian organizations such as the Humanitarian Accountability Partnership (HAP) (http://www.hapinternational.org/news/story.aspx?id=269) and the Movement for Global Mental Health (MGMH) (http://www.globalmentalhealth.org/news_events/news/humanitarian-emergency-settings-perceived-needs-scale-hesper-released). Printed copies can also be obtained through the WHO website (http://apps.who.int/bookorders/anglais/detart1.jsp?codlan=1&codcol=15&codcch=824) or Amazon (http://www.amazon.co.uk/Humanitarian-Emergency-Settings-Perceived-HESPER/dp/9241548231).

5.6 Discussion

Findings

The HESPER Scale was successfully field-tested with a diverse range of populations affected by humanitarian crises in Jordan, Haiti and Nepal, where it showed itself to have satisfactory psychometric properties overall. Inter-rater reliability, test-retest reliability and internal consistency results were generally adequate to excellent across the three field-sites (though internal consistency was somewhat lower in Haiti than in the other two samples), providing support for the adequacy of the HESPER Scale and its accompanying interviewers' training manual. Also, most HESPER items correlated with related questions of the WHOQOL-100 and the GHQ-12 roughly as was predicted before data collection, suggesting criterion (concurrent) validity of the scale. What is more,

the HESPER Scale took just under 20 minutes to administer on average across the three field-sites (ranging between around 15 and 22 minutes in the three settings), and data was collected rapidly over a short time period, which was in keeping with the aims and criteria set out for the scale (see Section 3.2).

Whilst inter-rater reliability across the three field-sites and test-retest reliability in Jordan was very good to excellent, test-retest reliability in Nepal was substantially lower. Ten of 12 participants in Nepal who were asked to provide an explanation for this indicated that they made some deliberate effort to respond differently during the two interviews. This suggests reduced validity of the test-retest reliability results in Nepal, as it may be a reflection of affected populations' conscious attempts to influence humanitarian response, for instance by over-estimating the seriousness of their needs [270]. Thus, although the psychometric results for the HESPER Scale so far are very promising, these issues highlight the need for more work to be conducted across different settings, to provide further evidence for reliability and validity of the scale.

However, the psychometric results from field-testing of the HESPER Scale were sufficient in supporting the finalization of the scale. The HESPER Scale and accompanying interviewers' training manual were subsequently published as part of a detailed HESPER manual for project leaders or supervisors, following a few minor revisions. French and Spanish versions of the HESPER Scale, in addition to the English, Arabic, Haitian Creole and Nepali versions already developed, were also made available to encourage use of the scale in a wide range of settings.

Limitations

The use of random probability samples as well as the larger sample sizes employed during field-testing of the HESPER Scale should have counter-acted some of the biases which may have existed during previous pilot-testing of the scale in Jordan, Gaza and Sudan, in particular those that were due to

convenience samples and small sample sizes having been employed during pilot-testing of the scale (see Section 4.4 for further details). However, there were still several limitations and challenges present during field-testing of the HESPER Scale, many of which – as was the case during pilot-testing of the scale – were due to the resource and logistical constraints that are common in humanitarian settings.

One of these was that there were some limitations in the way the HESPER Scale's psychometric properties were measured due to feasibility issues. An unavoidable such limitation was that raters could not be completely independent from each other due to the HESPER Scale's method of administration [19, 26, 179, 187], which meant that silent raters' responses may have been affected by the interviewer's questions, as well as by their personal characteristics and manners. The method of having a second interviewer silently rate the scale to assess inter-rater reliability may have therefore resulted in inter-rater reliability having been over-estimated. However, test-retest reliability results would have not been affected by this, which at least in Jordan were very good, providing support for the adequacy of the HESPER Scale.

A further limitation relating to the HESPER Scale's psychometric properties was that test-retest reliability was not assessed in Haiti, restricting the number of sites for which test-retest reliability of the HESPER Scale has been established. Moreover, although the WHOQOL-100 has been extensively used and validated worldwide [280], it had not been validated for the populations in which the HESPER Scale was field-tested, thereby reducing the strength of the assessed validity. Conversely, the GHQ-12 had been successfully used in at least two of the settings (Jordan and Nepal) [282, 283], and had been validated in at least one of them (Nepal) [283].

Furthermore, sampling methods were often challenging. In particular, as there was no complete list of households or individuals available in Jordan and Haiti,

random-walk methods had to be employed, which may have resulted in the selection of households into the study having been prone to bias. Furthermore, in Haiti men were underrepresented, and only three of the around 1,300 displacement camps that existed in Haiti at the time of the research were included into the study due to feasibility issues. Additionally, the response rate in Jordan was relatively low. The findings may therefore have not been generalisable to the affected populations at large in the three settings [105]. However, the effect of such biases on the psychometric estimates of the HESPER Scale is likely to have been minimal, as within psychometrics the focus is more upon substantive responses than upon the representativeness of participants (also see Chapter 6 for further details on these potential biases, and the effects they may have had on the larger study).

A further limitation was that back-translation methods were not employed for the translation of project materials in Haiti, which may have led to some inaccuracies in the data, and the potential amplification of measurement error. However, back-translation techniques were employed in Jordan and Nepal, as is commonly considered to be the gold standard within scientific research, and all translations and data were double-checked by the author to reduce inaccuracies (see Section 4.4 for a longer discussion on limitations related to the translation of materials).

A final limitation was that interviewers in Jordan were not of the same cultural background as participants. This may have inhibited participants' trust towards the interviewers, and therefore may have resulted in less honest answers from them, especially as fear levels (for instance fear of deportation) were high amongst the Iraqi population in Jordan [253, 298]. However, all Jordanian interviewers were highly experienced in interviewing members of the Iraqi population, and no problems were encountered during interviews.

Further work

Field-testing of the HESPER Scale in three relevant populations affected by humanitarian emergencies to establish its psychometric properties completed the development of the scale; the scale, as well as its accompanying interviewers' training manual, were subsequently published as part of a detailed HESPER manual. However, to establish the HESPER Scale's adequacy as a practical humanitarian needs assessment tool, it was not only important to determine its psychometric properties, but also to demonstrate its ability to provide useful data on perceived needs. The next chapter therefore describes a study which employed the HESPER Scale as a tool to measure perceived needs, and to provide data to predict mental health outcome within populations affected by humanitarian emergencies (see Chapter 6); this was conducted at the same time and with the same population groups as during the HESPER field-testing study.

CHAPTER 6

Use of the HESPER Scale – Perceived Needs and Symptoms of Common Mental Disorder

6.1 Introduction

This chapter describes a study on the use of the newly developed Humanitarian Emergency Settings Perceived Needs (HESPER) Scale (see Chapters 4 and 5 for its development and psychometric testing), both as a practical needs assessment tool to measure the level of perceived needs in populations affected by humanitarian emergencies, as well as assessing the scale's applicability in providing data that is able to predict mental health outcome in these contexts. The study represented the second part of 'Phase 3' of the HESPER project, as highlighted in the box below.

- *Phase 1 (2008):* Development of a first draft scale through a process of item generation and item reduction, based on first a literature review, and second a survey with humanitarian experts (Section 3.7 and Appendix E1).
- *Phase 2 (2009):* Preparation of the draft scale for pilot-testing (Section 4.2). Pre-testing of the draft scale in the UK with refugees from the Democratic Republic of the Congo (DRC) (Section 4.3), and subsequent pilot-testing in Jordan with displaced Iraqi people, and with the local populations in Gaza and Sudan (Section 4.4), to assess the scale's feasibility, intelligibility, comprehensiveness and cultural applicability, to determine the suitability of training materials, and to establish face and content validity. Expert survey on the ideal length of the scale (Section 4.4).
- ***Phase 3 (2010):*** Field-testing of the revised draft scale in Jordan with displaced Iraqi people, in Haiti with people living in post-earthquake displacement camps, and in Nepal with Bhutanese refugees, to assess its psychometric properties (i.e. inter-rater and test-retest reliability, internal consistency, and criterion (concurrent) validity) (Chapter 5). **Study to measure the level of perceived needs in these settings, and to assess the relationship between symptoms of common mental disorder, perceived unmet needs, and past traumatic events (Chapter 6).**

Objectives of study

The objectives of the study were to:

1. Assess the level of perceived needs in three populations affected by humanitarian emergencies (displaced Iraqi people in Jordan; earthquake-affected population in Haiti; and Bhutanese refugees in Nepal).
2. Assess the level of perceived needs across different sub-groups of these populations, in particular by gender.
3. Explore the relationship between symptoms of common mental disorder, current perceived unmet needs and past traumatic events in these settings, in particular the role of current perceived unmet needs in explaining the association between past traumatic events and symptoms of common mental disorder.

To avoid repetition, background information for each of these objectives is provided below in brief only. More detailed background information is contained in Chapter 2.

HESPER Scale as measure of perceived needs

This section relates to the first objective of the study. The HESPER Scale was developed to rapidly provide psychometrically robust quantitative data on perceived needs in representative samples of populations affected by humanitarian emergencies (see Section 3.3 for further details). To establish the scale's ability to do so, it was therefore not only important to assess its psychometric properties (i.e. reliability and validity) (as seen in Chapter 5), but also to demonstrate its use and usefulness in providing data on perceived needs. This was addressed in the study described in this chapter by measuring the level of perceived needs in three diverse populations affected by humanitarian emergencies (in Jordan, Haiti and Nepal).

Between-gender differences in perceived needs

This section addresses the second objective of the study. The HESPER Scale was developed with the aim of being able to provide representative data on

perceived needs not only for whole populations affected by humanitarian emergencies, but also for sub-groups within a population by disaggregating data across groups. Since women have commonly been reported to have particular needs in addition to the needs experienced by men in humanitarian settings [27, 28] (also see Section 2.3.1), it is plausible that women would display a larger number of unmet needs compared to men in such contexts, though – as far as the author is aware – there have been no studies directly addressing this. This study therefore not only assessed perceived needs within the three study populations at large, but also looked at between-gender differences in perceived needs within these populations.

Perceived unmet needs, past traumatic events, and symptoms of common mental disorder

This section is relevant to the third objective of the study. In addition to providing descriptive data on perceived needs, the HESPER Scale could be used to help address the following question: To what extent do current needs experienced in the post-emergency environment account for the impact of traumatic exposure on mental health (e.g. [36, 94-96])? Historically, there has been a heavy emphasis placed within humanitarian mental health research on the potentially traumatic events experienced during a humanitarian emergency, and the effects these may have on affected populations' mental health [42, 120, 141, 144, 157]. In recent years though, in line with a broader 'mental health and psychosocial support' framework (see Section 2.3.3 for further details), there has been a move away from pure trauma-focused approaches to also look at current needs in the modifiable post-emergency recovery environment as important factors in determining mental health outcome [1, 35, 36, 38, 39, 299] (see Section 2.5.3 for further details). However, although there have been some models proposed to explain the interaction between these variables in conflict-affected populations [36, 94, 95] (see Section 2.5.3 for further details), it is not yet clear how much of the variance in mental health outcome may be predicted by current needs in the recovery environment versus traumatic events that have occurred previously, and what the nature of this interaction is.

The study described in this chapter applied the HESPER Scale as measure of perceived needs to explore this issue, not only in conflict-affected populations but across a wider range of humanitarian settings. The mental health outcome employed in this study was symptoms of common mental disorder (as measured along a continuum rather than diagnostically), as high levels of distress (i.e. symptoms of common mental disorder) are widespread within populations affected by humanitarian emergencies (see Section 2.5.1 for further details), and as a large part of the variance in distress symptomatology remains unexplained in humanitarian settings (see Section 2.5.3 for further details).

Hypotheses

The primary hypotheses of the study were that:

1. Women would have:
    a) A higher number of perceived unmet needs than men, and
    b) Different perceived unmet needs compared to men.
2. Participants with a higher number of perceived unmet needs would have more symptoms of common mental disorder than those with a lower number of perceived unmet needs.
3. Participants with a higher number of past traumatic events would have more symptoms of common mental disorder than those with a lower number of past traumatic events.

Secondary research questions that were explored included:

4. How much of the relative variance in symptoms of common mental disorder could be explained by perceived unmet needs, past traumatic events and gender, and what the nature of this interaction was.
5. Whether participants with perceived unmet needs in any of the HESPER Scale's items would have more symptoms of common mental disorder than participants who reported no need for the particular item.

6.2 Methods

Design

Data were collected during field-testing of the HESPER Scale (see Chapter 5). To ensure that the study was conducted in a wide range of population groups to which the HESPER Scale was applicable, members of three different populations affected by humanitarian crises were included in the study – displaced Iraqi people in Jordan, people living in post-earthquake displacement camps in Haiti, and Bhutanese refugees in Nepal.

The study followed a cross-sectional design. 817 participants in total (269 participants in Jordan and Nepal each, and 279 in Haiti) were interviewed in one-to-one assessments by local interviewers in their own home/shelters on one occasion. All participants were administered the following:

- The HESPER Scale (see Appendix A3), as measure of perceived needs.
- The General Health Questionnaire (GHQ)-12 [272], as measure for symptoms of common mental disorder (i.e. symptoms of depression and anxiety) (the GHQ-12 is not included as Appendix due to copyright regulations).
- The traumatic events list of the post-traumatic stress disorder (PTSD) section of the Composite International Diagnostic Schedule (CIDI) 3.0 [289] (see Appendix D4), as measure of past traumatic life events.

Samples

As was the case during field-testing of the HESPER Scale (see Section 5.2), in Jordan 269 Iraqi participants displaced following the 2003 invasion to Iraq were interviewed in July 2010; in Haiti 279 people living in displacement camps following the January 2010 earthquake were interviewed in September 2010; and in Nepal 269 Bhutanese refugees were interviewed in October and November 2010. All participants were at least 18 years old, as the HESPER Scale was developed and psychometrically tested for adult populations only. There were no further inclusion/exclusion criteria.

These population groups were suitable as study participants, as they all had direct experience of living in a humanitarian setting; in Jordan, the Iraqi participants had been exposed to large-scale conflict and displacement following the invasion to Iraq in 2003; in Haiti, participants had been internally displaced following a large-scale earthquake; and in Nepal, participants had been living in a refugee camp for several years after having been forcibly expelled from Bhutan in the 1990s (see Section 5.2 for further details on the suitability of study participants).

All participants in the three settings were selected into the study using different random probability sampling techniques, according to what was appropriate and feasible (see 'Procedure' section below for further details on the sampling methods employed in each of the study sites, as well as on sample size calculations).

Settings

The settings are as described in Section 5.2 (see pages 178 to 179).

Measures

The newly developed HESPER Scale was used as a measure of perceived needs (see Chapter 3 for an overview of the scale, and Chapters 4 and 5 for its development and psychometric properties; see also [168]).

The GHQ-12 [272] was used as a measure for symptoms of common mental disorder (i.e. symptoms of depression and anxiety). The scale provides a total score based on 12 questions relating to symptoms of depression and anxiety. It was employed here as it had been used extensively worldwide, including in Jordan [282] and Nepal [283], and amongst Iraqi populations as a measure of distress as part of the World Mental Health Survey Initiative which was conducted with over 154,000 participants across 28 countries [284]. It has also

been psychometrically validated in a wide range of settings and languages, including Arabic and Nepali versions [283, 285, 286].

The traumatic events list of the PTSD section of the CIDI [289] was used as measure of past traumatic events. The scale lists 27 potentially traumatic events, several of which (though not all) directly relate to events common in conflict or other disastrous situations; a total score of traumatic exposure can then be computed by counting the number of events experienced. Participants are also able to list additional traumatic events experienced. The traumatic events list of the CIDI was employed in this study, as it has been used in a wide range of settings globally, including amongst Iraqi populations as part of the World Mental Health Survey Initiative [165, 284] (see above), as well as amongst Bhutanese refugees in Nepal [300].

Procedure

The study was conducted over the same time period, and with the same local collaborators, as during field-testing of the HESPER Scale (see Section 5.2 for further details). The overall research procedures for the study included the following:

- Obtaining of ethics approval for the study.
- Recruitment of organizations to collaborate for the study in three relevant populations affected by humanitarian emergencies.
- Translation and adaptation of project materials to the local context in the three study sites (Jordan, Haiti and Nepal).
- Recruitment and training of interviewers in the three study sites.
- Sample size calculations for the study in the three sites.
- Sampling of study participants in the three sites.
- Data collection in the three study sites.

These procedures are now described in turn. Where the research procedures were identical to those employed during field-testing of the HESPER Scale – i.e.

for information on ethics approval obtained, the recruitment of local organizations for collaboration, and the recruitment and training of interviewers –, the procedures are outlined in Section 5.2 only (see pages 180 to 194), to avoid duplicate information across chapters.

Translation and adaptation of project materials

Arabic, French and Nepali versions of the GHQ-12 and the traumatic events list of the CIDI were obtained from distributors or other research groups before the study commenced. All other project materials, including the HESPER Scale, HESPER interviewers' training manual, and participant information sheet and consent form, were prepared by the author and sent to the local collaborating agencies (World Health Organization (WHO) Jordan country office [256] in Jordan; International Medical Corps (IMC) [278] in Haiti; and Transcultural Psychosocial Organization (TPO) Nepal [279] in Nepal; see page 183 in Section 5.2 for information on how these organizations were recruited for collaboration) for their translation into Arabic (Jordan), Haitian Creole (Haiti), and Nepali (Nepal). The French versions of the GHQ-12 and traumatic events list of the CIDI were also sent by the author to the local collaborating agency (IMC) in Haiti for their translation into Haitian Creole (as no Haitian Creole versions of these instruments existed). In brief, these materials were translated using back-translation methods in Jordan and Nepal, and simple translation techniques in Haiti (see Section 5.2 for further details on the translation procedures employed).

In Jordan, an additional 27th need item on 'Residency and resettlement' was included in the HESPER Scale based on previous findings made during pilot-testing of the draft HESPER Scale. In Haiti, an additional 27th item on 'Burying and mourning the dead in your community' was included in the scale due to field-observations that this was an important issue in this setting (see Section 5.2 for further details). Furthermore, in Jordan, the term 'community' was replaced with the more suitable 'Iraqis you know in Jordan' throughout the HESPER Scale, as is advised on the HESPER Scale (see Appendix A3; also see [167]). The term

'community' was considered appropriate in Haiti and Nepal, so was not replaced with a different phrase in these settings.

The traumatic events list of the CIDI was also adapted to suit the local contexts based on previous research on the relevance of items. In Jordan, to shorten the interview process, the list of traumatic events was reduced from 27 to 17 items by removing 15 unessential items and adding five relevant additional items. These revisions were based on the *Iraq Mental Health Survey* [301], which had published data previously on items that were locally relevant to Iraqis, using the traumatic events list of the CIDI. In Nepal, an additional item on torture was added based on previous research that this was a commonly experienced traumatic event amongst Bhutanese refugees [151, 152]. In Haiti, no revisions were made to the traumatic events list of the CIDI, as there was no relevant data available.

Sample size calculations

To estimate sample size requirements for the measurement of perceived needs in the three study sites (i.e. to address the first objective of the study; see Section 6.1), a sample size calculation was performed based on estimated prevalence rates of perceived unmet need ratings of individual HESPER items. For this, prevalence rates were estimated to be 50% for HESPER items, as this results in the most conservative (i.e. highest) sample size estimate [302]. Using this estimate, as well as a level of precision of 10%, and 95% confidence intervals (as is common and usually appropriate within epidemiological surveys [292]), the calculation showed that a sample size of 96 would be necessary in each of the three study sites to accurately identify prevalence rates of perceived unmet needs.

Furthermore, sample size requirements were calculated that would enable gender differences in perceived unmet needs to be assessed, as well as the relationship between mental health outcome and perceived unmet needs (i.e. to address the second and third objectives of the study). This calculation was based

on gender differences in the level of perceived unmet needs found during pilot-testing of the draft HESPER Scale in Jordan, Gaza and Sudan (see Section 4.4), since previous results in the literature on which to base estimates for sample size requirements were inconsistent. This showed that a sample size of 260 participants per site allowed for a difference in two perceived unmet needs (as measured by the HESPER Scale) to be detected, with 90% power, a significance level of 5%, and a common standard deviation of 7. This was considered adequate for the purposes of the study.

To fulfil sample size requirements for all three of the study's objectives, the larger minimum sample size of 260 (rather than 96) participants was employed in each of the three study sites.

Sampling of participants

In brief, Iraqi participants in Jordan were recruited through a multi-stage cluster sampling design, involving 30 clusters of city districts (see Figure 5.1 in Section 5.2, page 190, for an example of a cluster map used for sampling in Jordan). The sample was geographically representative of Iraqis living in Jordan (around 75% of the sample lived in Amman, and 25% outside of Amman). In Haiti, the three displacement camps included in the study were purposively selected to provide information for the implementing agency's (IMC's) future programmes. In Jordan and Haiti, within clusters or camps respectively, participants were selected using a two-stage systematic random sampling method, the first stage being households and the second stage being individuals within households. Since in both settings there was no reliable list available of households, the random-walk method was employed to recruit households within clusters (Jordan) or camps (Haiti); a random-number Kish Table [293] was used to select individuals from within chosen households. In Nepal, participants were recruited through simple random sampling methods; a list of randomly selected adult Bhutanese refugees living in Beldangi-II camp was obtained from the United Nations High Commissioner for Refugees (UNHCR) (see Section 5.2 for further details on sampling).

Data collection

Interviews were conducted in Jordan over eight working days between 6th and 14th July 2010; in Haiti over eight working days between 22nd September and 1st October 2010; and in Nepal over 17 working days between 10th October and 4th November 2010. Interviews were conducted by the previously trained local interviewers (see Section 5.2, pages 186 to 187, for details on their recruitment and training) during one-to-one assessments in participants' own homes in Arabic in Jordan, Haitian Creole in Haiti, and Nepali in Nepal (with data being translated into English following interviews). Interviewers were supervised by a local team leader in all three study sites; the author also silently observed several interviews in all three settings (see Section 5.2 for further details).

During interviews, all participants (269 in Jordan and Nepal, and 279 in Haiti) were explained the purpose of the study by interviewers, gave their free written or verbal informed consent to take part (see 'Ethics' section in Section 5.2, pages 181 to 183, for further details), and were then all administered the HESPER Scale (see Appendix A3), followed by the GHQ-12 and finally the traumatic events list of the CIDI (see Appendix D4). Participants were thanked at the end of interviews, were given the opportunity to ask any questions, were provided with the contact details of the local collaborating agencies, and in Jordan were given an information brochure with support organisations available to them.

Analyses

Data analyses were performed in SPSS 15.0 [243] and SPSS 17.0 [297]; all data analyses were performed by the author apart from the mediator analyses (see below for further details). Data were entered into SPSS by the author in Jordan and Haiti, and by a research assistant in Nepal; entered data were double-checked by the author in all three settings to ensure accuracy.

Descriptive analyses

To gain an overview of the data, simple counts and prevalence rates were performed for categorical demographic variables (i.e. sex, marital status, level of education, and religion), as well as for frequencies of need ratings and priority ratings of individual HESPER items, ratings for individual items of the traumatic events list of the CIDI, and for number of participants who listed additional items on both the HESPER Scale and CIDI. Means and standard deviations were calculated for continuous demographic data (i.e. age, number of children, and number of years displaced), for total number of perceived unmet needs recorded on the HESPER Scale, total number of past traumatic events listed on the CIDI, number of additional unmet items listed on the HESPER Scale, and total GHQ-12 scores.

Additional unmet needs listed on the HESPER Scale by participants were categorised and simple counts were performed. As was the case during pilot-testing of the draft HESPER Scale, any additional unmet needs listed that corresponded to existing HESPER items were assigned to matching HESPER items, whereas those additional unmet needs listed that did not seem to fit any of the existing HESPER items, or that were more specific than related HESPER items, were treated as separate items during the analyses (see Section 4.4.2 for further details).

Psychometric analyses

Cronbach's alphas were calculated to measure the internal consistency of the GHQ-12 and traumatic events list of the CIDI, to assess whether they were psychometrically adequate for inclusion into the study, in particular as their total scores were being used.

Between-group analyses

To assess between-group differences (in particular by gender), chi-squared tests (χ^2) were employed for categorical variables (i.e. for between-gender differences in participant ratings of individual HESPER items), and independent t-tests were

used for continuous variables (i.e. for between-gender differences in total number of unmet need ratings on the HESPER Scale, in total number of past traumatic events listed on the CIDI, and in total GHQ-12 score, as well as for between-group differences in GHQ-12 scores according to participant ratings of individual HESPER and CIDI items).

For chi-squared tests (χ^2), where over 20% of the expected numbers in cells were below 5, the Fisher's exact test (for 2 x 2 tables) or exact significance test for Pearson's chi-square (for other tables) were selected [303]. Furthermore, the more conservative Yates' continuity correction was employed for all other 2 x 2 tables [304].

To account for multiple tests, a conservative significance level of 1% was employed during the analyses of between-gender differences in need ratings and priority ratings of individual HESPER items, as well as for between-group differences in GHQ-12 scores according to participant ratings of individual HESPER and CIDI items; a significance level of 5% was employed for all other analyses (as is the norm within statistical analyses).

Correlation analyses

Pearson's r correlation coefficients were calculated to assess individual relationships between number of perceived unmet needs (as measured by the HESPER Scale), number of past traumatic events (as measured by the CIDI), and symptoms of common mental disorder (as measured by the GHQ-12).

Mediator analyses

To identify the mechanism that underlies the relationship between past traumatic events and symptoms of common mental disorder in humanitarian settings, a series of mediator analyses were conducted in each of the three study sites. These analyses were performed and written up by the main contact person of one of the collaborating agencies in Nepal (Dr Mark Jordans, HealthNet TPO) in close consultation with the author and other members of the HESPER project

group due to his expertise in such statistical analyses, and were published as part of a research paper on which him and the author shared joint first authorship [305] (see Appendix F2 for paper). Whilst in the research paper only the results from Jordan and Nepal were included based on advice from two reviewers' comments that the paper would be stronger with the Haiti data excluded, the results from all three study sites are included in this chapter, as the author felt that the inclusion of the Haiti data made for more compelling and comprehensive interpretations. The text that follows in the remainder of this sub-section, as well as the figures, table and some of the text in the relevant paragraphs of the 'Results' part of this chapter, are taken in a slightly modified form from the published research paper.

Within a mediator model, it is hypothesized that the effect of the independent variable (in this case number of past traumatic events) on the dependent variable (i.e. symptoms of common mental disorder) is changed by the mediator variable (in this study number of perceived unmet needs) [306, 307]. The mediator variable thus clarifies the nature of the relationship between the independent and dependent variables, and is the mechanism through which a predictor influences an outcome variable. Whilst direct effects refer to the relationship between a predictor variable (X) and outcome variable (Y), indirect effects refer to the effect of the predictor (X) on the outcome (Y) via a mediator variable (M). As predictor variables may have both direct and indirect effects on an outcome variable, both the direct effect of number of past traumatic events on symptoms of common mental disorder was examined in this study, as well as the indirect effect of number of past traumatic events on symptoms of common mental disorder via number of perceived unmet needs.

Within this study, the *c* path was used to refer to a significant relationship between the predictor (X) and the outcome (Y), when not accounting for indirect effects (i.e. total effect). The *a* path was used to refer to the relationship of the predictor (X) with the mediator (M), and the *b* path to the relationship of the mediator (M) with the outcome variable (Y). When M was included in the model,

the indirect effect was used to refer to the *a* by *b* pathway, and *c'* to the direct effect of X on Y. The indirect effect can also be conceptualized as the difference between the total effect and the direct effect (*c* - *c'*). This study investigated the theoretical model in which the 'number of perceived unmet needs' variable was the mediator (M) for the association between the predictor 'number of past traumatic events' (X) and the outcome 'symptoms of common mental disorder' (Y). Analyses were conducted per country sample and no between-country comparisons were made, since the study sites were very different from each other, and the number of items included in the HESPER Scale and traumatic events list of the CIDI varied across settings.

Traditional approaches to mediator testing have been criticized, and alternative approaches using bootstrapping procedures have been developed to test direct versus indirect effects [308]. Bootstrapping is a non-parametric technique to obtain parameter estimates by numerous re-samplings of the data, and is used to test the likelihood of the mediation by producing robust confidence intervals for the estimates. Simulation studies have shown that bootstrap estimation compares favourably with distribution-based estimation or significance tests for simple mediation models (i.e. one mediator) [309]. A regression-based approach to mediation analysis was therefore employed with bootstrap estimation of indirect effects, with data being re-sampled 5000 times. Regression-analysis based approaches are indeed common within mediation analyses [310].

A Preacher and Hayes' indirect macro for SPSS was used in the present study, which calculates bootstrap estimates of indirect effect for models of one or more mediators [308] (see http://www.afhayes.com/spss-sas-and-mplus-macros-and-code.html for macro). A strength of the indirect macro is that it allows for the inclusion of covariates. Should the problem of confounding (of associations) be present, a model that does not control for the effect of confounding variables may produce a biased estimate of the exposure effect. This study included covariates of age and gender, as these variables had been found to be significant covariates in prior multiple mediation models in Nepal [311].

6.3 Results

Respondents

Table 5.1 in Section 5.3 (see page 197) displays the demographic characteristics of participants at the three study sites; Section 5.3 also contains information on the response rates of participants.

Perceived needs (HESPER Scale)

Total number of perceived unmet needs

The mean number of perceived unmet need ratings across participants was 11.34 in Jordan (SD=6.14) (ranging between 0 and 24 out of a possible 27); 22.9 in Haiti (SD=3.0) (ranging between 10 and 27 out of a possible 27); and 8.13 in Nepal (SD=4.66) (ranging between 0 and 21 out of a possible 26).

There were no significant differences between genders in total number of perceived unmet need ratings in all three study sites. The means were 11.04 (SD=6.27) and 11.58 (SD=6.05) for men and women respectively in Jordan ($t(257, n=259)=-0.7$, $p=.48$); 22.51 (SD=3.45) and 22.94 (SD=2.85) respectively in Haiti ($t(263, n=265)=-0.93$, $p=.356$); and 8.53 (SD=4.74) and 7.71 (SD=4.56) for men and women respectively in Nepal ($t(266, n=268)=1.43$, $p=.154$).

Individual HESPER items – Need ratings

Tables 6.1 (Jordan), 6.2 (Haiti) and 6.3 (Nepal) display need ratings of individual HESPER items in each of the three settings.

In Jordan, HESPER items which were most commonly rated as unmet need by participants were 'Being displaced from home' (85.5% of participants), 'Separation from family members' (78.4%), 'Income or livelihood' (74.0%), 'Distress' (73.5%) and 'Aid' (71.7%). Items which were rated least commonly as unmet need by participants were 'Alcohol or drug use amongst Iraqis you know in Jordan' (3.0%) and 'Safety or protection from violence for female Iraqis you know in Jordan' (8.6%).

In Haiti, all of the HESPER Scale's 27 items were rated as unmet need by at least half of participants (ranging between 49.8% and 100%). The item 'Place to live in' was rated as unmet need by all participants. Similarly, 'Income or livelihood' (99.6%), 'Care for family members' (97.9%), 'Aid' (97.1%), and 'Too much free time' (97.1%) were almost universally rated as unmet need.

In Nepal, the item 'Income or livelihood' was rated as unmet need by 75.1% of participants, more than any other item. The following items were rated as unmet need by around half of participants: 'Food' (58.0%), 'Being displaced from home' (52.0%), 'Clothing, shoes, bedding, or blankets' (49.1%), 'Place to live in' (44.6%), and 'Separation from family members' (42.0%). The item that was rated by fewest participants as unmet need was 'Drinking water' (6.7%).

Table 6.1 Number of participants in Jordan (% in brackets) who rated each HESPER item as unmet need (i.e. serious problem), no need (i.e. no serious problem), or did not answer (i.e. refused, not known, or not applicable) (n=269)

HESPER items	Unmet need	No need	No answer
1. Being displaced from home	230 (85.5%)	38 (14.1%)	1 (0.4%)
2. Separation from family members	211 (78.4%)	58 (21.6%)	0
3. Income or livelihood	199 (74.0%)	70 (26.0%)	0
4. Distress	197 (73.5%)	70 (26.1%)	1 (0.4%)
5. Aid	193 (71.7%)	193 (23.8%)	12 (4.5%)
6. Residency or resettlement	157 (58.8%)	110 (41.2%)	0
7. Too much free time	158 (58.7%)	111 (41.3%)	0
8. Health care	151 (56.1%)	116 (43.1%)	2 (0.7%)
9. Physical health	136 (50.7%)	132 (49.3%)	0
10. Place to live in	123 (45.7%)	146 (54.3%)	0
11. Support from others	118 (44.5%)	140 (52.8%)	7 (2.6%)
12. Clothing, shoes, bedding or blankets	119 (44.2%)	150 (55.8%)	0
13. Drinking water	109 (40.5%)	160 (59.5%)	0
14. Mental illness amongst Iraqis you know in Jordan	104 (38.7%)	126 (46.8%)	39 (14.5%)
15. Information	104 (38.7%)	164 (61.0%)	1 (0.4%)
16. Food	89 (33.1%)	179 (66.5%)	1 (0.4%)
17. Care for Iraqis you know in Jordan who are on their own	85 (31.6%)	136 (50.6%)	48 (17.8%)
18. Care for family members	82 (30.5%)	152 (56.5%)	35 (13.0%)
19. Moving between places	79 (29.4%)	187 (69.5%)	3 (1.1%)
20. Law and justice for Iraqis you know in Jordan	73 (27.1%)	163 (60.6%)	33 (12.3%)
21. Keeping clean	73 (27.1%)	196 (72.9%)	0
22. Toilets	62 (23.2%)	204 (76.4%)	1 (0.4%)
23. Respect	54 (20.1%)	207 (77.0%)	8 (3.0%)
24. Education for your children	42 (15.6%)	123 (45.7%)	104 (38.7%)
25. Safety	38 (14.1%)	231 (85.9%)	0
26. Safety or protection from violence for female Iraqis you know in Jordan	23 (8.6%)	196 (72.9%)	50 (18.6%)
27. Alcohol or drug use amongst Iraqis you know in Jordan	8 (3.0%)	199 (74.0%)	62 (23.0%)

Areas are ranked and listed in descending order of unmet need ratings.
Numbers do not always add up to total number of participants due to missing data.

Table 6.2 Number of participants in Haiti (% in brackets) who rated each HESPER item as unmet need (i.e. serious problem), no need (i.e. no serious problem), or did not answer (i.e. refused, not known, or not applicable) (n=279)

HESPER items	Unmet need	No need	No answer
1. Place to live in	279 (100%)	0	0
2. Income or livelihood	278 (99.6%)	1 (0.4%)	0
3. Care for family members	273 (97.9%)	5 (1.8%)	1 (0.4%)
4. Aid	271 (97.1%)	6 (2.2%)	2 (0.7%)
5. Too much free time	267 (97.1%)	8 (2.9%)	0
6. Food	266 (95.3%)	13 (4.7%)	0
6. Being displaced from home	266 (95.3%)	13 (4.7%)	0
8. Separation from family members	264 (95.0%)	14 (5.0%)	0
9. Care for people in your community who are on their own	263 (95.3%)	9 (3.3%)	4 (1.4%)
10. Keeping clean	257 (92.5%)	21 (7.6%)	0
10. Clothing, shoes, bedding or blankets	257 (92.5%)	21 (7.6%)	0
10. Distress	257 (92.5%)	21 (7.6%)	0
13. Information	251 (90.0%)	25 (9.0%)	3 (1.1%)
14. Support from others	251 (90.0%)	28 (10.0%)	0
15. Law and justice in your community	245 (87.8%)	31 (11.1%)	3 (1.1%)
16. Respect	242 (86.7%)	36 (12.9%)	1 (0.4%)
17. Drinking water	232 (83.2%)	47 (16.8%)	0
18. Safety	231 (82.8%)	48 (17.2%)	0
19. Burying and mourning the dead in your community	228(82.0%)	46 (16.5%)	4 (1.4%)
20. Education for your children	224 (80.3%)	26 (9.3%)	29 (10.4%)
21. Alcohol or drug use in your community	205 (73.5%)	48 (17.2%)	26 (9.3%)
22. Moving between places	200 (71.7%)	79 (28.3%)	0
23. Safety or protection from violence for women in your community	191 (68.5%)	66 (23.7%)	22 (7.9%)
24. Toilets	189 (68.2%)	88 (31.8%)	0
25. Health care	186 (66.7%)	84 (30.1%)	9 (3.2%)
26. Physical health	155 (55.6%)	124 (44.4%)	0
27. Mental illness in your community	138 (49.8%)	116 (41.9%)	23 (8.3%)

Areas are ranked and listed in descending order of unmet need ratings.
Numbers do not always add up to total number of participants due to missing data.

Table 6.3 Number of participants in Nepal (% in brackets) who rated each HESPER item as unmet need (i.e. serious problem), no need (i.e. no serious problem), or did not answer (i.e. refused, not known, or not applicable) (n=269)

HESPER items	Unmet need	No need	No answer
1. Income or livelihood	202 (75.1%)	67 (24.9%)	0
2. Food	156 (58.0%)	113 (42.0%)	0
3. Being displaced from home	140 (52.0%)	121 (45.0%)	8 (3.0%)
4. Clothing, shoes, bedding or blankets	132 (49.1%)	137 (50.9%)	0
5. Place to live in	120 (44.6%)	149 (55.4%)	0
6. Separation from family members	113 (42.0%)	156 (58.0%)	0
7. Alcohol or drug use in your community	111 (41.3%)	156 (58.0%)	2 (0.7%)
8. Physical health	107 (39.8%)	162 (60.2%)	0
9. Care for people in your community who are on their own	96 (35.7%)	170 (63.2%)	3 (1.1%)
10. Distress	93 (34.6%)	176 (65.4%)	0
11. Too much free time	91 (33.8%)	178 (66.2%)	0
12. Keeping clean	84 (31.2%)	185 (68.8%)	0
13. Care for family members	75 (28.0%)	193 (72.0%)	0
14. Toilets	75 (27.9%)	194 (72.1%)	0
15. Moving between places	70 (26.0%)	199 (74.0%)	0
16. Safety or protection from violence for women in your community	69 (25.7%)	193 (71.7%)	7 (2.6%)
17. Law and justice in your community	67 (24.9%)	192 (71.4%)	10 (3.7%)
18. Health care	67 (24.9%)	201 (74.7%)	1 (0.4%)
19. Mental illness in your community	63 (23.4%)	203 (75.5%)	3 (1.1%)
20. Aid	52 (19.3%)	217 (80.7%)	0
21. Safety	45 (16.7%)	224 (83.3%)	0
22. Information	42 (15.6%)	226 (84.0%)	1 (0.4%)
23. Education for your children	36 (13.4%)	201 (74.7%)	32 (11.9%)
24. Respect	32 (11.9%)	237 (88.1%)	0
25. Support from others	29 (10.8%)	240 (89.2%)	0
26. Drinking water	18 (6.7%)	251 (93.3%)	0

Areas are ranked and listed in descending order of unmet need ratings.
Numbers do not always add up to total number of participants due to missing data.

Using a conservative significance level of 1%, there was a significant gender difference in perceived need ratings in Jordan only for the HESPER item 'Education for your children' (38 (32.8%) men and 85 (55.6%) women rated this as no need, 17 (14.7%) men and 25 (16.3%) women rated it as unmet need, and 61 (52.6%) men and 43 (28.1%) women did not answer; $\chi^2(2, n=269)=17.85$, $p<.0005$); and in Haiti for the item 'Alcohol or drug use in your community' (34 (68.0%) men rated this as an unmet need compared to 171 (74.7%) women, 15 (30%) men and 33 (14.4%) women rated it as no need, and 1 (2.0%) man and 25 (10.9%) women did not answer; $\chi^2(2, n=279)=9.55$, $p=.008$). In Nepal, there were no significant gender differences in perceived need ratings for any of the HESPER items.

Individual HESPER items – Priority ratings

Tables 6.4 (Jordan), 6.5 (Haiti) and 6.6 (Nepal) show priority ratings for individual HESPER items in each of the three study sites, i.e. the frequencies with which items were rated by participants as one of their three most serious problems.

In Jordan, HESPER items which were rated most commonly by participants as one of their three most serious problems were 'Income and livelihood' (55.0% of participants), 'Residency or resettlement' (37.2%), 'Health care' (23.1%), 'Separation from family members' (22.7%), 'Aid' (19.7%) and 'Being displaced from home' (17.8%).

In Haiti, the HESPER item 'Place to live in' was rated by a large majority of participants as one of their top three priority areas (88.5%). Furthermore, 'Food' (54.1%), 'Income or livelihood' (50.2%) and 'Education for your children' (41.2%) were named by around half of participants as one of their three most serious problems, and 'Health care' by 12.5% of participants.

In Nepal, the HESPER item 'Income or livelihood' was rated by almost half of all participants (47.2%) as one of their three most serious problems, more than any other problem area. Other areas which were given priority ratings by more than

10.0% of all participants included ‘Food’ (24.5%), ‘Physical health’ (23.0%), ‘Place to live in’ (20.8%), ‘Being displaced from home’ (18.6%), 'Separation from family members' (16.7%), 'Clothing, shoes, bedding or blankets' (16.4%), and 'Alcohol or drug use in your community' (14.5%).

Table 6.4 Number of participants in Jordan (% in brackets) who rated each HESPER item as one of their three most serious problems (n=269)

HESPER items	Total priority ratings	Priority rating 1	Priority rating 2	Priority rating 3
1. Income or livelihood	148 (55.0%)	82 (30.5%)	48 (17.8%)	18 (6.7%)
2. Residency or resettlement	100 (37.5%)	52 (19.5%)	28 (10.5%)	20 (7.5%)
3. Separation from family members	61 (22.7%)	18 (6.7%)	25 (9.3%)	18 (6.7%)
4. Health care	62 (23.1%)	13 (4.8%)	28 (10.4%)	21 (7.8%)
5. Being displaced from home	48 (17.8%)	19 (7.1%)	17 (6.3%)	12 (4.5%)
6. Aid	53 (19.7%)	10 (3.7%)	20 (7.4%)	23 (8.6%)
7. Place to live in	30 (11.2%)	8 (3.0%)	15 (5.6%)	7 (2.6%)
8. Physical health	31 (11.6%)	10 (3.7%)	8 (3.0%)	13 (4.9%)
9. Too much free time	25 (9.3%)	4 (1.5%)	6 (2.2%)	15 (5.6%)
10. Drinking water	20 (7.4%)	4 (1.5%)	7 (2.6%)	9 (3.3%)
11. Distress	17 (6.3%)	4 (1.5%)	5 (1.9%)	8 (3.0%)
12. Education for your children	13 (4.8%)	7 (2.6%)	3 (1.1%)	3 (1.1%)
13. Care for family members	13 (4.8%)	1 (0.4%)	7 (2.6%)	5 (1.9%)
14. Mental illness amongst Iraqis you know in Jordan	10 (3.7%)	1 (0.4%)	5 (1.9%)	4 (1.5%)
15. Food	8 (3.0%)	2 (0.7%)	2 (0.7%)	4 (1.5%)
16. Respect	8 (3.0%)	0	3 (1.1%)	5 (1.9%)
17. Clothing, shoes, bedding or blankets	7 (2.6%)	2 (0.7%)	0	5 (1.9%)
18. Law and justice for Iraqis you know in Jordan	6 (2.2%)	2 (0.7%)	1 (0.4%)	3 (1.1%)
19. Moving between places	6 (2.2%)	1 (0.4%)	3 (1.1%)	2 (0.7%)
20. Care for Iraqis you know in Jordan who are on their own	4 (1.5%)	1 (0.4%)	0	3 (1.1%)
21. Alcohol or drug use amongst Iraqis you know in Jordan	2 (0.7%)	1 (0.4%)	1 (0.4%)	0
22. Information	3 (1.1%)	0	1 (0.4%)	2 (0.7%)
23. Support from others	2 (0.8%)	0	0	2 (0.7%)
24. Safety	2 (0.7%)	0	0	2 (0.7%)
25. Toilets	1 (0.4%)	0	0	1 (0.4%)
26. Keeping clean	0	0	0	0
26. Safety or protection from violence for female Iraqis you know in Jordan	0	0	0	0

Items are ranked and listed in descending order of total priority ratings, taking into account whether the item was rated as the first, second, or third most serious problem (see page 117).

Table 6.5 Number of participants in Haiti (% in brackets) who rated each HESPER item as one of their three most serious problems (n=279)

HESPER items	Total priority ratings	Priority rating 1	Priority rating 2	Priority rating 3
1. Place to live in	247 (88.5%)	163 (58.4%)	55 (19.7%)	29 (10.4%)
2. Food	151 (54.1%)	20 (7.2%)	71 (25.4%)	60 (21.5%)
3. Income or livelihood	140 (50.2%)	42 (15.1%)	55 (19.7%)	43 (15.4%)
4. Education for your children	115 (41.2%)	20 (7.2%)	45 (16.1%)	50 (17.9%)
5. Health care	35 (12.5%)	8 (2.9%)	11 (3.9%)	16 (5.7%)
6. Safety	27 (9.7%)	6 (2.2%)	7 (2.5%)	14 (5.0%)
7. Drinking water	15 (5.4%)	3 (1.1%)	6 (2.2%)	6 (2.2%)
8. Too much free time	18 (6.5%)	3 (1.1%)	5 (1.8%)	10 (3.6%)
9. Physical health	17 (6.1%)	4 (1.4%)	3 (1.1%)	10 (3.6%)
10. Aid	11 (3.9%)	1 (0.4%)	3 (1.1%)	7 (2.5%)
11. Safety or protection from violence for women in your community	7 (2.5%)	1 (0.4%)	3 (1.1%)	3 (1.1%)
12. Separation from family members	6 (2.2%)	2 (0.7%)	1 (0.4%)	3 (1.1%)
13. Clothing, shoes, bedding or blankets	9 (3.2%)	0	2 (0.7%)	7 (2.5%)
14. Toilets	4 (1.4%)	2 (0.7%)	1 (0.4%)	1 (0.4%)
15. Distress	5 (1.8%)	0	2 (0.7%)	3 (1.1%)
16. Keeping clean	5 (1.8%)	0	1 (0.4%)	4 (1.4%)
17. Law and justice in your community	3 (1.1%)	1 (0.4%)	0	2 (0.7%)
18. Moving between places	3 (1.1%)	0	2 (0.7%)	1 (0.4%)
19. Care for family members	4 (1.4%)	0	1 (0.4%)	3 (1.1%)
20. Alcohol or drug use in your community	1 (0.4%)	1 (0.4%)	0	0
21. Being displaced from home	1 (0.4%)	1 (0.4%)	0	0
21. Burying and mourning the dead in your community	1 (0.4%)	1 (0.4%)	0	0
23. Information	1 (0.4%)	0	1 (0.4%)	0
23. Respect	2 (0.7%)	0	1 (0.4%)	1 (0.4%)
25. Support from others	0	0	0	0
25. Mental illness in your community	0	0	0	0
25. Care for people in your community who are on their own	0	0	0	0

Items are ranked and listed in descending order of total priority ratings, taking into account whether the item was rated as the first, second, or third most serious problem (see page 117).

Table 6.6 Number of participants in Nepal (% in brackets) who rated each HESPER item as one of their three most serious problems (n=269)

HESPER items	Total priority ratings	Priority rating 1	Priority rating 2	Priority rating 3
1. Income or livelihood	127 (47.2%)	57 (21.2%)	38 (14.1%)	32 (11.9%)
2. Food	66 (24.5%)	28 (10.4%)	20 (7.4%)	18 (6.7%)
3. Physical health	62 (23.0%)	27 (10.0%)	19 (7.1%)	16 (5.9%)
4. Place to live in	56 (20.8%)	18 (6.7%)	22 (8.2%)	16 (5.9%)
5. Being displaced from home	50 (18.6%)	19 (7.1%)	19 (7.1%)	12 (4.5%)
6. Separation from family members	45 (16.7%)	15 (5.6%)	12 (4.5%)	18 (6.7%)
7. Clothing, shoes, bedding or blankets	44 (16.4%)	5 (1.9%)	16 (5.9%)	23 (8.6%)
8. Alcohol or drug use in your community	39 (14.5%)	10 (3.7%)	13 (4.8%)	16 (5.9%)
9. Care for people in your community who are on their own	21 (7.8%)	7 (2.6%)	6 (2.2%)	8 (3.0%)
9. Health care	21 (7.8%)	6 (2.2%)	9 (3.3%)	6 (2.2%)
9. Distress	21 (7.8%)	6 (2.2%)	9 (3.3%)	6 (2.2%)
12. Toilets	19 (7.1%)	5 (1.9%)	8 (3.0%)	6 (2.2%)
13. Too much free time	18 (6.7%)	7 (2.6%)	4 (1.5%)	7 (2.6%)
13. Mental illness in your community	18 (6.7%)	5 (1.9%)	6 (2.2%)	7 (2.6%)
15. Care for family members	17 (6.3%)	5 (1.9%)	8 (3.0%)	4 (1.5%)
16. Education for your children	16 (5.9%)	4 (1.5%)	11 (4.1%)	1 (0.4%)
16. Safety or protection from violence for women in your community	16 (5.9%)	3 (1.1%)	7 (2.6%)	6 (2.2%)
18. Keeping clean	11 (4.1%)	1 (0.4%)	4 (1.5%)	6 (2.2%)
19. Moving between places	10 (3.7%)	2 (0.7%)	5 (1.9%)	3 (1.1%)
20. Safety	9 (3.3%)	5 (1.9%)	2 (0.7%)	2 (0.7%)
21. Aid	8 (3.0%)	4 (1.5%)	2 (0.7%)	2 (0.7%)
21. Law and justice in your community	8 (3.0%)	2 (0.7%)	3 (1.1%)	3 (1.1%)
23. Drinking water	7 (2.6%)	4 (1.5%)	1 (0.4%)	2 (0.7%)
24. Respect	3 (1.1%)	1 (0.4%)	0	2 (0.7%)
25. Support from others	2 (0.7%)	0	0	2 (0.7%)
26. Information	0	0	0	0

Items are ranked and listed in descending order of total priority ratings, taking into account whether the item was rated as the first, second, or third most serious problem (see page 117).

Using a conservative significance level of 1%, there were significant gender differences in priority ratings in Jordan for the HESPER items 'Drinking water' (2 (1.7%) men rated this as one of their three most serious problems compared to 18 (11.8%) women; $\chi^2(1, n=269)=14.47$, Yates' $p<.0005$), and 'Residency or resettlement' which was added to the HESPER Scale in Jordan only (54 (46.6%) men rated this as one of their three most serious problems compared to 46 (30.1%) women; $\chi^2(1, n=269)=6.99$, Yates' $p=.008$).

In Haiti, there was a significant difference between genders in priority ratings only for the HESPER item 'Place to live in' (36 (72.0%) men rated this as one of their three most serious problems compared to 211 (92.1%) women; $\chi^2(1, n=269)=8.26$, Yates' $p=.004$).

In Nepal, there was a significant gender difference in priority ratings only for the HESPER item 'Drinking water' (no men rated this as one of their three most serious problems compared to 7 (5.4%) women; $\chi^2(1, n=269)=7.69$, Fisher's exact $p=.006$).

Additional unmet needs

87 (32.3%) participants in Jordan named at least one additional unmet need on the HESPER Scale when asked whether they would like to do so, as well as 42 (15.1%) participants in Haiti, and 71 (26.4%) participants in Nepal. On average (mean figures), participants in Jordan named 0.49 (SD=0.78) additional unmet needs (ranging between 0 and 3); in Haiti, 0.16 (SD=0.4) additional unmet needs (ranging between 0 and 2); and in Nepal, 0.31 (SD=0.57) additional unmet needs (ranging between 0 and 3).

Tables 6.7 (Jordan), 6.8 (Haiti) and 6.9 (Nepal) show additional unmet needs which were named by at least two participants in each of the three study sites, and which could either not be directly attributed to already existing HESPER items, or which were more specific than related HESPER items.

Table 6.7 Additional unmet need items listed on the HESPER Scale by at least two participants in Jordan (n=269)

Additional unmet need items listed	Number of participants who listed item (% in brackets)	Number of participants who gave item a priority rating (% in brackets)
Employment	21 (7.8%)	11 (4.1%)
Problems with the UN	10 (3.7%)	3 (1.1%)
Problems with other organisations	7 (2.6%)	2 (0.7%)
Health care for family members	7 (2.6%)	4 (1.5%)
Psychological problems	5 (1.9%)	3 (1.1%)
Rent	4 (1.5%)	3 (1.1%)
Living in another country to family members	4 (1.5%)	2 (0.7%)
Health of family members	4 (1.5%)	3 (1.1%)
Residency/Visa for family members	3 (1.1%)	0
University education for children	3 (1.1%)	3 (1.1%)
Fear of deportation	3 (1.1%)	0
Employment for family members	2 (0.7%)	1 (0.4%)
Inability to move back to Iraq	2 (0.7%)	0
Stability	2 (0.7%)	2 (0.7%)
Kitchen supplies	2 (0.7%)	1 (0.4%)

Items are listed according to the number of participants who named the item.

Table 6.8 Additional unmet need items listed on the HESPER Scale by at least two participants in Haiti (n=279)

Additional unmet need items listed	Number of participants who listed item (% in brackets)	Number of participants who gave item a priority rating (% in brackets)
Uncertainty about the future	10 (3.6%)	0
Electricity	2 (0.7%)	0
Flooding/heavy rainfall	2 (0.7%)	0
Safe/quiet place	2 (0.7%)	0
Better future	2 (0.7%)	0
Diseases due to living conditions	2 (0.7%)	0

Items are listed according to the number of participants who named the item.

Table 6.9 Additional unmet need items listed on the HESPER Scale by at least two participants in Nepal (n=269)

Additional unmet need items listed	Number of participants who listed item (% in brackets)	Number of participants who gave item a priority rating (% in brackets)
Resettlement	43 (16.0%)	13 (4.8%)
Lack of nationality/citizenship	4 (1.5%)	0
Inability to return to Bhutan	4 (1.5%)	1 (0.4%)
Physical health/disability of family member	3 (1.1%)	0
Lack of children	3 (1.1%)	1 (0.4%)
Skills-based training/adult education	3 (1.1%)	0
Family member(s) missing	2 (0.7%)	1 (0.4%)
Lack of aid for family member	2 (0.7%)	2 (0.7%)
Treatment for large-scale diseases	2 (0.7%)	1 (0.4%)

Items are listed according to the number of participants who named the item.

Past traumatic events (CIDI)

Internal consistency

Cronbach's alphas for internal consistency of the traumatic events list of the CIDI were 0.77 in Jordan; 0.68 in Haiti; and 0.74 in Nepal.

Total number of past traumatic events

The mean number of past traumatic events listed by participants on the traumatic events list of the CIDI were 6.9 (SD=3.28) in Jordan (out of a possible maximum of 16); 8.78 (SD=3.29) in Haiti (out of a possible maximum of 27); and 4.36 (SD=3.01) in Nepal (out of a possible maximum of 28).

There were no significant gender differences in the mean number of past traumatic events declared in all three study sites; in Jordan men and women listed 7.26 (SD=3.65) and 6.63 (SD=2.95) events respectively (t(212.26, n=266)=1.53, p=.128, equal variances not assumed); in Haiti they listed 9.18 (SD=2.83) and 8.7 (SD=3.38) traumatic events respectively (t(250,

n=252)=0.89, p=.376); and in Nepal men and women declared 4.47 (SD=2.91) and 4.24 (SD=3.13) events respectively (t(261, n=263)=0.6, p=.547).

Symptoms of common mental disorder (GHQ-12)

Internal consistency

Cronbach's alphas for internal consistency of the GHQ-12 were 0.89 in Jordan; 0.65 in Haiti; and 0.88 in Nepal.

Total scores

The mean GHQ-12 scores for participants were 16.5 (SD=7.3) in Jordan; 21.25 (SD=5.43) in Haiti; and 13.77 (SD=7.01) in Nepal (out of a possible score of between 0 and 36).

On average, women showed more symptoms of common mental disorder than men in both the Haiti and Nepal samples; their mean GHQ-12 scores in Haiti were 21.75 (SD=5.5) for women and 18.77 (SD=4.34) for men (t(73.96, n=261)=-3.96, p<.0005, equal variances not assumed); and in Nepal were 15.33 (SD=7.51) and 12.29 (SD=6.18) for women and men respectively (t(248.37, n=266)=-3.59, p<.0005, equal variances not assumed). There were no significant gender differences in symptoms of common mental disorder in Jordan; the mean GHQ-12 scores were 16.15 (SD=6.77) and 16.96 (SD=7.95) for women and men respectively (t(260, n=262)=0.88, p=.38).

Perceived needs and symptoms of common mental disorder

Total number of perceived unmet need ratings (as measured by the HESPER Scale) correlated significantly with symptoms of common mental disorder (as measured by the GHQ-12) in all three study sites (Jordan: r=0.67, p<.0005; Haiti: r=0.16, p=.012; Nepal: r=0.35, p<.0005).

Table 6.10 shows the between-group analyses for symptoms of common mental disorder according to the need ratings of individual HESPER items, i.e. whether participants rated items as 'unmet need' (i.e. serious problem) or 'no need' (i.e.

no serious problem). Using a conservative significance level of 1%, there were significant differences in GHQ-12 scores between participants who rated the item as 'unmet need' compared to 'no need' in Jordan for 25 HESPER items (i.e. all but two items), in Haiti for six items (out of a possible 27), and in Nepal for 12 HESPER items (out of a possible 26). There were significant between-group differences in GHQ-12 scores in more than one of the study sites for the HESPER items 'Clothing, shoes, bedding and blankets', 'Physical health', and 'Health care' (in all three study sites each), as well as for the items 'Food', 'Place to live in', 'Toilets', 'Keeping clean', 'Income or livelihood', 'Distress', 'Support from others', 'Separation from family members', 'Information', 'Respect', 'Moving between places', and 'Too much free time' (two study sites each); for these items participants who rated the item as 'unmet need' had significantly higher GHQ-12 scores on average than those who rated the item as 'no need'. In Jordan (but not in Haiti and Nepal), participants who listed at least one additional unmet need on the HESPER Scale also had significantly higher GHQ-12 scores than those who did not. The only item across sites for which those participants who rated the item as 'no need' had significantly higher GHQ-12 scores on average than those who rated it as 'unmet need' was 'Burying and mourning the dead in your community' in Haiti.

Table 6.10 Between-group analyses for symptoms of common mental disorder (i.e. GHQ-12 scores) by individual need ratings of HESPER items in the three study sites (Jordan, n=269; Haiti, n=279; Nepal, n=269)

HESPER items[1]	mean GHQ-12 score for 'unmet need' ratings (SD)	mean GHQ-12 score for 'no need' ratings (SD)	t-value (d.f.)	test statistic
1. Drinking water				
Jordan	19.31 (6.93)	14.59 (6.94)	-5.41 (260)	p<.0005*
Haiti	21.13 (5.3)	21.84 (6.09)	0.78 (259)	p=.438
Nepal	12.89 (6.53)	13.83 (7.05)	0.55 (264)	p=.583
2. Food				
Jordan	20.17 (6.63)	14.68 (6.96)	-6.1 (259)	p<.0005*
Haiti	21.47 (5.38)	17.08 (4.73)	-2.88 (259)	p=.004*
Nepal	14.4 (7.03)	12.87 (6.92)	-1.75 (264)	p=.081
3. Place to live in				
Jordan	19.99 (6.11)	13.5 (6.91)	-7.99 (260)	p<.0005*
Haiti[2]	N/A	N/A	N/A	N/A
Nepal	15.26 (7.24)	12.57 (6.61)	-3.16 (264)	p=.002*
4. Toilets				
Jordan	20.81 (6.49)	15.1 (7.05)	-5.67 (257)	p<.0005*
Haiti	21.03 (5.2)	21.82 (5.89)	1.09 (257)	p=.278
Nepal	16.53 (8.88)	12.68 (6.78)	-4.15 (264)	p<.0005*
5. Keeping clean				
Jordan	19.48 (6.06)	15.39 (7.42)	-4.55 (152.31)[3]	p<.0005*
Haiti	21.32 (5.47)	20.4 (4.94)	-0.73 (259)	p=.468
Nepal	15.8 (7.31)	12.83 (6.69)	-3.27 (264)	p=.001*
6. Clothing, shoes, bedding or blankets				
Jordan	20.04 (6.49)	13.77 (6.71)	-7.61 (260)	p<.0005*
Haiti	21.59 (5.37)	17.43 (4.76)	-3.44 (258)	p=.001*
Nepal	15.55 (7.37)	12.06 (6.22)	-4.17 (252.54)[3]	p<.0005*
7. Income or livelihood				
Jordan	18.43 (6.58)	11.2 (6.54)	-7.88 (260)	p<.0005*
Haiti	21.26 (5.43)	18.0[4]	-0.6 (259)	p=.55
Nepal	14.61 (7.1)	11.25 (6.12)	-3.46 (264)	p=.001*

8. Physical health				
Jordan	19.24 (7.15)	13.81 (6.38)	-6.48 (259)	p<.0005*
Haiti	22.75 (5.17)	19.34 (5.16)	-5.3 (259)	p<.0005*
Nepal	16.28 (7.39)	12.13 (6.25)	-4.75 (196.05)[3]	p<.0005*
9. Health care				
Jordan	18.83 (6.9)	13.54 (6.76)	-6.18 (258)	p<.0005*
Haiti	22.12 (5.13)	19.84 (5.59)	-3.2 (251)	p=.002*
Nepal	16.92 (7.26)	12.74 (6.64)	-4.33 (263)	p<.0005*
10. Distress				
Jordan	18.84 (6.81)	10.41 (4.41)	-11.66 (190.13)[3]	p<.0005*
Haiti	21.33 (5.53)	20.29 (4.22)	-0.84 (258)	p=.401
Nepal	16.47 (7.41)	12.31 (6.35)	-4.59 (165.26)[3]	p<.0005*
11. Safety				
Jordan	21.73 (5.84)	15.64 (7.17)	-5.68 (55.49)[3]	p<.0005*
Haiti	21.42 (5.38)	20.39 (5.65)	-1.16 (259)	p=.248
Nepal	14.73 (6.8)	13.58 (7.05)	-0.99 (264)	p=.321
12. Education for your children				
Jordan	19.93 (5.83)	15.87 (7.25)	-3.58 (82.09)	p=.001*
Haiti	21.77 (5.41)	19.21 (5.03)	-2.22 (233)	p=.028
Nepal	14.86 (8.3)	14.04 (6.94)	-0.63 (232)	p=.528
13. Care for family members				
Jordan	20.34 (7.26)	13.88 (6.36)	-6.96 (226)	p<.0005*
Haiti	21.31 (5.44)	19.0 (4.74)	-0.94 (258)	p=.346
Nepal	15.72 (8.15)	13.05 (6.39)	-2.53 (109.51)[3]	p=.013
14. Support from others				
Jordan	19.62 (6.92)	13.96 (6.62)	-6.6 (249)	p<.0005*
Haiti	21.24 (5.23)	21.33 (7.01)	0.07 (29.44)[3]	p=.947
Nepal	19.9 (7.38)	13.02 (6.6)	-5.23 (264)	p<.0005*
15. Separation from family members				
Jordan	17.89 (7.01)	11.38 (5.97)	-6.36 (260)	p<.0005*
Haiti	21.29 (5.42)	19.92 (5.6)	-0.86 (258)	p=.393
Nepal	15.19 (7.41)	12.73 (6.54)	-2.86 (264)	p=.005*

16. Being displaced from home				
Jordan	17.39 (7.05)	10.97 (6.46)	-5.19 (259)	p<.0005*
Haiti	21.27 (5.47)	20.92 (4.52)	-0.22 (259)	p=.829
Nepal	13.95 (6.96)	13.57 (7.14)	-0.43 (257)	p=.666
17. Information				
Jordan	19.45 (6.64)	14.66 (7.13)	-5.42 (259)	p<.0005*
Haiti	21.29 (5.45)	20.64 (4.99)	-0.57 (256)	p=.57
Nepal	17.61 (7.85)	13.01 (6.6)	-3.98 (263)	p<.0005*
18. Aid				
Jordan	18.21 (6.65)	11.52 (6.69)	-6.94 (248)	p<.0005*
Haiti	21.31 (5.38)	18.17 (6.74)	-1.4 (257)	p=.16
Nepal	14.65 (7.73)	13.55 (6.83)	-1.02 (264)	p=.31
19. Respect				
Jordan	21.85 (5.37)	14.98 (7.01)	-7.78 (252)	p<.0005*
Haiti	21.28 (5.35)	21.14 (6.01)	-0.14 (258)	p=.888
Nepal	17.5 (8.15)	13.26 (6.7)	-3.27 (264)	p=.001*
20. Moving between places				
Jordan	20.78 (6.52)	14.65 (6.84)	-6.68 (257)	p<.0005*
Haiti	21.38 (5.31)	20.92 (5.72)	-0.63 (259)	p=.533
Nepal	17.24 (7.3)	12.53 (6.49)	-5.05 (264)	p<.0005*
21. Too much free time				
Jordan	18.94 (6.89)	13.07 (6.45)	-6.97 (260)	p<.0005*
Haiti	21.44 (5.42)	17.33 (2.25)	-4.19 (6.48)[3]	p=.005*
Nepal	14.13 (6.2)	13.58 (7.41)	-0.61 (264)	p=.541
22. Law and justice in your community				
Jordan	18.83 (7.12)	15.67 (7.32)	-3.05 (227)	p=.003*
Haiti	21.27 (5.43)	20.7 (5.61)	-0.54 (256)	p=.589
Nepal	13.7 (7.4)	13.61 (6.83)	-0.09 (254)	p=.93
23. Safety or protection from violence for women in your community				
Jordan	20.04 (6.12)	16.16 (7.4)	-2.24 (213)	p=.017
Haiti	20.95 (5.25)	21.53 (5.68)	0.74 (239)	p=.462
Nepal	14.19 (7.05)	13.51 (6.9)	-0.7 (257)	p=.484

24. Alcohol or drug use in your community				
Jordan	18.0 (8.07)	16.31 (7.4)	-0.63 (200)	p=.529
Haiti	21.45 (5.26)	19.47 (5.82)	-2.23 (234)	p=.027
Nepal	14.28 (7.12)	13.39 (6.98)	-1.02 (262)	p=.309
25. Mental illness in your community				
Jordan	19.08 (6.9)	14.54 (7.03)	-4.86 (223)	p<.0005*
Haiti	21.8 (5.12)	20.25 (5.79)	-2.2 (235)	p=.029
Nepal	15.63 (7.72)	13.19 (6.71)	-2.43 (261)	p=.016
26. Care for people in your community who are on their own				
Jordan	20.11 (6.72)	14.42 (6.95)	-5.92 (213)	p<.0005*
Haiti	21.24 (5.45)	21.78 (5.26)	0.29 (252)	p=.773
Nepal	13.83 (6.87)	13.69 (7.14)	-0.16 (261)	p=.876
Residency or resettlement				
Jordan[5]	19.28 (6.49)	12.5 (6.52)	-8.27 (258)	p<.0005*
Burying and mourning the dead in your community				
Haiti[5]	20.62 (5.29)	23.74 (5.38)	3.62 (255)	p<.0005*
Additional unmet need listed (yes/no)				
Jordan	19.54 (6.22)	15.04 (7.35)	-4.87 (260)	p<.0005*
Haiti	22.27 (6.08)	21.06 (5.29)	-1.31 (259)	p=.191
Nepal	14.67 (7.41)	13.44 (6.85)	-1.26 (264)	p=.209

Items are listed according to their order in the final HESPER Scale, together with their item numbers.

* Significant at below significance level of 1%.

[1] See Appendix A3 for item questions.

[2] Between-group comparisons could not be performed, as all participants rated the item as 'unmet need'.

[3] Equal variances not assumed, at significance level of 5%.

[4] Standard deviation could not be calculated, as only one participant rated the item as 'no need'.

[5] Item was included in this study site only.

Past traumatic events and symptoms of common mental disorder

Total number of past traumatic events (as measured by the traumatic events list of the CIDI) correlated significantly with symptoms of common mental disorder (as measured by the GHQ-12) in all three study sites (Jordan: $r=0.42$, $p<.0005$; Haiti: $r=0.14$, $p=.024$; Nepal: $r=0.36$, $p<.0005$).

Table 6.11 displays the between-group analyses for symptoms of common mental disorder (i.e. GHQ-12 scores) by ratings of individual CIDI items, i.e. whether participants reported having experienced a particular past traumatic event, or not. Using a conservative significance level of 1%, there were significant differences in GHQ-12 scores between those who had experienced an event compared to those who had not in Jordan for nine CIDI items (out of a possible 16), in Haiti for two CIDI items (out of a possible 27), and in Nepal for six CIDI items (out of a possible 28); for these items, participants who had experienced the event had significantly higher GHQ-12 scores on average than those who had not experienced the event. The only item for which there were significant between-group differences in GHQ-12 scores in more than one of the study sites was 'Have you ever had a [child] who had a life-threatening illness or injury' (Jordan and Nepal), as well as for participants who listed an additional item compared to those who did not (all three study sites), and participants who admitted not reporting at least one past traumatic event compared to those who did not 'because they did not want to talk about it' (Jordan and Haiti).

Table 6.11 Between-group analyses for symptoms of common mental disorder (i.e. GHQ-12 scores) by ratings of individual CIDI items at the three study sites, together with the number of participants who had, or had not, experienced the event (Jordan, n= 269; Haiti, n=279; Nepal, n=269)

CIDI items[1]	Number of 'yes' ratings[2]	Number of 'no' ratings[2]	Mean GHQ-12 score for 'yes' ratings (SD)	Mean GHQ-12 score for 'no' ratings (SD)	t-value (d.f.)	test statistic
'…ever participated in combat…'						
Jordan	20 (7.4%)	240 (89.2%)	18.6 (8.94)	16.41 (7.11)	-1.3 (258)	p=.197
Haiti	10 (3.6%)	253 (90.7%)	22.7 (4.42)	21.13 (5.47)	-0.89 (255)	p=.373
Nepal	1 (0.4%)	265 (98.5%)	31.0[6]	13.7 (6.94)	-2.49 (264)	p=.014
'…ever served as a peacekeeper or relief worker in a warzone or in a place [with] ongoing terror…' [5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	15 (5.4%)	248 (88.9%)	22.33 (3.83)	21.12 (5.52)	-1.15 (17.82)[3]	p=.265
Nepal	5 (1.9%)	261 (97.0%)	17.0 (6.08)	13.7 (7.02)	-1.04 (264)	p=.299
'…ever an unarmed civilian in a place [of] war, revolution, military coup or invasion'[5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	11 (3.9%)	252 (90.3%)	19.0 (3.8)	21.29 (5.49)	1.37 (255)	p=.172
Nepal	29 (10.8%)	235 (87.4%)	16.79 (7.43)	13.38 (6.91)	-2.49 (262)	p=.014
'…ever lived as a civilian in a place where there was ongoing terror of civilians…' [5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	28 (10.0%)	233 (83.5%)	21.48 (5.24)	21.19 (5.49)	-0.26 (253)	p=.792
Nepal	81 (30.1%)	180 (66.9%)	15.3 (7.63)	12.98 (6.59)	-2.37 (135.86)[3]	p=.019

'…ever been a refugee…' [5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	62 (22.2%)	201 (72.0%)	20.23 (5.58)	21.49 (5.37)	1.59 (255)	p=.113
Nepal	251 (93.3%)	14 (5.2%)	13.99 (7.01)	10.07 (6.34)	-2.05 (263)	p=.042
'…ever kidnapped or held captive'						
Jordan	31 (11.5%)	230 (85.5%)	19.35 (8.62)	16.11 (7.05)	-2.34 (259)	p=.02
Haiti	5 (1.8%)	262 (93.9%)	20.2 (5.72)	21.24 (5.42)	0.42 (258)	p=.672
Nepal	11 (4.1%)	255 (94.8%)	18.0 (8.57)	13.58 (6.9)	-2.06 (264)	p=.041
'…ever exposed to a toxic chemical or substance that could cause you serious harm' [5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	142 (50.9%)	123 (44.1%)	21.71 (4.96)	20.61 (5.91)	-1.6 (229.13) [3]	p=.106
Nepal	8 (3.0%)	257 (95.5%)	14.75 (8.86)	13.73 (6.98)	-0.4 (263)	p=.687
'…ever involved in a life-threatening automobile accident'						
Jordan [4]	93 (34.6%)	168 (62.5%)	17.34 (7.02)	16.02 (7.45)	-1.4 (259)	p=.163
Haiti	61 (21.9%)	203 (72.8%)	21.48 (5.01)	21.13 (5.56)	-0.44 (255)	p=.661
Nepal	13 (4.8%)	253 (94.1%)	19.08 (6.66)	13.49 (6.93)	-2.84 (264)	p=.005*
'…ever have any other life-threatening accident…'						
Jordan [4]	93 (34.6%)	168 (62.5%)	17.34 (7.02)	16.02 (7.45)	-1.4 (259)	p=.163
Haiti	47 (16.8%)	219 (78.5%)	22.36 (5.07)	20.97 (5.48)	-1.56 (257)	p=.12
Nepal	27 (10.0%)	238 (88.5%)	15.89 (7.31)	13.52 (6.97)	-1.67 (263)	p=.097
'…ever involved in a major natural disaster…' [5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	265 (95.0%)	2 (0.7%)	21.29 (5.38)	12.5 (2.12)	-2.3 (258)	p=.022
Nepal	36 (13.4%)	227 (84.4%)	15.36 (7.87)	13.54 (6.88)	-1.44 (261)	p=.15

'…ever [been] in a man-made disaster…'						
Jordan	175 (65.1%)	87 (32.3%)	17.11 (7.46)	15.26 (6.84)	-1.94 (260)	p=.053
Haiti	90 (32.3%)	177 (63.4%)	21.42 (5.17)	21.12 (5.55)	-0.42 (258)	p=.674
Nepal	63 (23.4%)	201 (74.7%)	15.02 (6.99)	13.31 (6.98)	-1.69 (262)	p=.092
'…ever [had] a life-threatening illness'						
Jordan	60 (22.3%)	201 (74.7%)	18.62 (6.77)	15.9 (7.36)	-2.56 (259)	p=.011
Haiti	151 (54.1%)	113 (40.5%)	21.64 (5.51)	20.73 (5.25)	-1.32 (255)	p=.187
Nepal	141 (52.4%)	125 (46.5%)	15.61 (7.6)	11.69 (5.63)	-4.82 (256.1)[3]	p<.0005*
'as a child,... ever badly beaten up by … parents…'						
Jordan	28 (10.4%)	233 (86.6%)	21.5 (7.17)	15.88 (7.1)	-3.96 (259)	p<.0005*
Haiti	227 (81.4%)	40 (14.3%)	21.33 (5.44)	20.55 (5.33)	-0.82 (258)	p=.413
Nepal	23 (8.6%)	236 (87.7%)	15.7 (6.89)	13.53 (7.01)	-1.42 (257)	p=.158
'…ever [been] badly beaten up by a spouse or romantic partner'[5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	84 (30.1%)	182 (65.2%)	21.46 (5.15)	21.12 (5.56)	-0.47 (257)	p=.64
Nepal	13 (4.8%)	253 (94.1%)	18.69 (6.06)	13.51 (6.97)	-2.63 (264)	p=.009*
'…ever [been] badly beaten up by anybody else'[5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	50 (17.9%)	217 (77.8%)	21.92 (5.11)	21.06 (5.48)	-1.0 (258)	p=.317
Nepal	22 (8.2%)	241 (89.6%)	15.27 (6.87)	13.59 (7.05)	-1.07 (261)	p=.284
'…ever [been] mugged, held up, or threatened with a weapon'[5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	49 (17.6%)	218 (78.1%)	21.76 (5.2)	21.09 (5.47)	-0.77 (258)	p=.443
Nepal	12 (4.5%)	252 (93.7%)	18.33 (7.79)	13.54 (6.94)	-2.32 (262)	p=.021

'…ever [been] raped…' [5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	13 (4.7%)	254 (91.0%)	22.0 (4.51)	21.18 (5.47)	-0.53 (258)	p=.595
Nepal	4 (1.5%)	241 (89.6%)	21.25 (7.27)	13.63 (7.11)	-2.13 (243)	p=.035
'…ever [been] sexually assaulted or molested' [5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	28 (10.0%)	235 (84.2%)	23.59 (3.56)	20.97 (5.54)	-3.38 (42.54)[3]	p=.002*
Nepal	4 (1.5%)	243 (90.3%)	18.0 (10.68)	13.68 (7.08)	-1.2 (245)	p=.231
'has someone ever stalked you…' [5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	100 (35.8%)	162 (58.1%)	21.41 (5.5)	21.08 (5.4)	-0.47 (253)	p=.638
Nepal	34 (12.6%)	223 (82.9%)	17.76 (6.33)	13.18 (6.95)	-3.62 (255)	p<.0005*
'did someone very close…ever die unexpectedly…'						
Jordan	129 (48.0%)	132 (49.1%)	17.49 (7.41)	15.56 (7.11)	-2.15 (259)	p=.033
Haiti	203 (72.8%)	63 (22.6%)	21.82 (5.27)	19.45 (5.46)	-3.06 (257)	p=.002*
Nepal	93 (34.6%)	168 (62.5%)	14.72 (7.78)	13.22 (6.48)	-1.58 (163.03)[3]	p=.116
'…ever had a [child] who had a life-threatening illness or injury'						
Jordan	52 (19.3%)	204 (75.8%)	19.23 (6.08)	15.78 (7.42)	-3.1 (254)	p=.002*
Haiti	105 (37.6%)	154 (55.2%)	21.89 (5.27)	20.82 (5.43)	-1.56 (250)	p=.121
Nepal	65 (24.2%)	164 (61.0%)	17.4 (7.53)	12.98 (6.6)	-4.39 (227)	p<.0005*
'when… a child, did you ever witness serious physical fights at home…' [5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	58 (20.8%)	205 (73.5%)	20.18 (6.12)	21.47 (5.19)	1.58 (254)	p=.115
Nepal	21 (7.8%)	242 (90.0%)	16.33 (8.08)	13.5 (6.9)	-1.78 (261)	p=.076

'did anyone very close to you ever have an extremely traumatic experience…'						
Jordan	154 (57.2%)	105 (39.0%)	17.83 (6.91)	14.48 (7.5)	-3.71 (257)	p<.0005*
Haiti	135 (48.4%)	130 (46.6%)	21.86 (5.16)	20.49 (5.62)	-2.05 (256)	p=.042
Nepal	63 (23.4%)	201 (74.7%)	15.24 (7.89)	13.29 (6.7)	-1.77 (91.82)[3]	p=.081
'…ever seen someone being badly injured or killed, or unexpectedly seen a dead body'						
Jordan	172 (63.9%)	90 (33.5%)	17.79 (7.11)	14.03 (7.06)	-4.07 (260)	p<.0005*
Haiti	230 (82.4%)	37 (13.3%)	21.05 (5.35)	22.22 (5.8)	1.21 (258)	p=.227
Nepal	91 (33.8%)	175 (65.1%)	13.74 (7.19)	13.78 (6.94)	0.05 (264)	p=.959
'…ever did something that accidentally led to the serious injury or death of another person'[5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	13 (4.7%)	254 (91.0%)	22.73 (5.16)	21.15 (5.43)	-0.94 (258)	p=.346
Nepal	7 (2.6%)	256 (95.2%)	17.57 (6.9)	13.65 (7.04)	-1.46 (261)	p=.147
'…ever on purpose either seriously injured, tortured or killed another person'[5]						
Jordan	N/A	N/A	N/A	N/A	N/A	N/A
Haiti	6 (2.2%)	261 (93.5%)	20.83 (5.19)	21.23 (5.43)	0.18 (258)	p=.86
Nepal[7]	0	266 (98.9%)	N/A	N/A	N/A	N/A
'…ever seen atrocities or carnage such as mutilated bodies or mass killings'						
Jordan	155 (57.6%)	107 (39.8%)	17.68 (7.37)	14.79 (6.88)	-3.2 (260)	p=.002*
Haiti	145 (52.0%)	121 (43.4%)	21.54 (5.22)	20.8 (5.65)	-1.08 (257)	p=.281
Nepal	20 (7.4%)	245 (91.1%)	15.65 (7.8)	13.61 (6.95)	-1.25 (263)	p=.212

'…ever searched by the army or police'[5]						
Jordan	190 (70.6%)	72 (26.8%)	17.53 (7.45)	13.78 (6.16)	-3.81 (260)	p<.0005*
'…ever [been] exposed to shooting'[5]						
Jordan	209 (77.7%)	53 (19.7%)	17.19 (7.39)	13.79 (6.31)	-3.07 (260)	p=.002*
'…ever [been] intentionally shot at'[5]						
Jordan	36 (13.4%)	225 (83.6%)	20.39 (7.12)	15.86 (7.16)	-3.53 (259)	p<.0005*
'…ever witnessed the destruction of a place of worship'[5]						
Jordan	148 (55.0%)	114 (42.4%)	17.38 (7.13)	15.36 (7.4)	-2.24 (260)	p=.026
'..ever forced to live away from your hometown..' [5]						
Jordan	158 (58.7%)	104 (38.7%)	18.06 (6.95)	14.13 (7.21)	-4.42 (260)	p<.0005*
'…ever been tortured in any way…' [5]						
Nepal	28 (10.4%)	237 (88.1%)	18.21 (7.29)	13.27 (6.81)	-3.61 (263)	p<.0005*
at least one additional past traumatic event listed						
Jordan	89 (33.1%)	180 (66.9%)	19.71 (6.29)	14.62 (7.16)	-5.66 (256)	p<.0005*
Haiti	37 (13.3%)	229 (82.1%)	24.85 (3.87)	20.64 (5.44)	-5.57 (55.12)[3]	p<.0005*
Nepal	34 (12.6%)	232 (86.2%)	18.85 (6.86)	13.02 (7.73)	-4.71 (264)	p<.0005*
at least one traumatic event not reported						
Jordan	79 (29.4%)	183 (68.0%)	19.52 (6.36)	15.2 (7.31)	-4.56 (260)	p<.0005*
Haiti	52 (18.6%)	197 (70.6%)	23.02 (5.04)	20.72 (5.49)	-2.65 (241)	p=.009*
Nepal	7 (2.6%)	259 (96.3%)	18.86 (10.17)	13.63 (6.89)	-1.35 (6.15)[3]	p=.224

* Significant at below significance level of 1%.

[1] Please note that these are shortened versions of CIDI items. For full wordings of CIDI items, see Appendix D4.

[2] Numbers do not always add up to total number of participants due to missing data and 'not known/refused/not applicable' ratings.

[3] Equal variances not assumed, at significance level of 5%.

[4] In Jordan, these two items were combined into one item, as the Arabic version of the CIDI includes the items as combined item.

[5] This item was included in either one or two study sites only.

[6] Standard deviation could not be calculated, as only one participant reported having experienced the event.

[7] Between-group comparisons could not be performed, as no participants reported having experienced the event.

Perceived unmet needs and past traumatic events

There was a significant correlation between total number of past traumatic events (as measured by the traumatic events list of the CIDI) and total number of perceived unmet need ratings (as measured by the HESPER Scale) in all three study sites (Jordan: r=0.51, p<.0005; Haiti: r=0.37, p<.0005; Nepal: r=0.46, p<.0005).

Perceived unmet needs, past traumatic events, and symptoms of common mental disorder

Table 6.12 presents an overview of the mediator analyses, including all confidence intervals. Three models were assessed in each of the three study sites. Model 1 measured the direct association between number of past traumatic events and symptoms of common mental disorder, taking only the age and gender covariates into account, but not the mediator variable (i.e. number of perceived unmet needs). Within this model, number of past traumatic events were significantly associated with symptoms of common mental disorder in all three study sites (Jordan: r=0.42, p<.001; Haiti: r=0.2, p<.001; Nepal: r=0.32, p<.001).

Model 2a assessed the direct association between number of past traumatic events and symptoms of common mental disorder when including number of perceived unmet needs (the mediator variable) into the model, as well as the age and gender covariates. Within this model, the direct effect between number of past traumatic events and symptoms of common mental disorder was no longer statistically significant in the Jordan sample, but was still statistically significant in the Nepal and Haiti samples (though the direct effect was reduced compared to model 1) (Jordan: r=0.11, p>0.05; Haiti: r=0.16, p<.05; Nepal: r=0.2, p<.001). The direct association between number of perceived unmet needs and symptoms of common mental disorder was statistically significant in the Jordan and Nepal samples, but not in the Haiti sample (Jordan: r=0.6, p<.001; Haiti: r=0.1, p>0.05; Nepal: r=0.26, p<.001).

Model 2b assessed the indirect association between number of past traumatic events and symptoms of common mental disorder via perceived unmet needs. This indirect effect was statistically significant in the Jordan and Nepal samples, but not in the Haiti sample (Jordan: r=0.31, p<0.001; Haiti: r=0.04, p>0.05; Nepal: r=0.12, p<0.001).

Table 6.12 Direct and indirect effects for number of past traumatic events on symptoms of common mental disorder in the three study sites

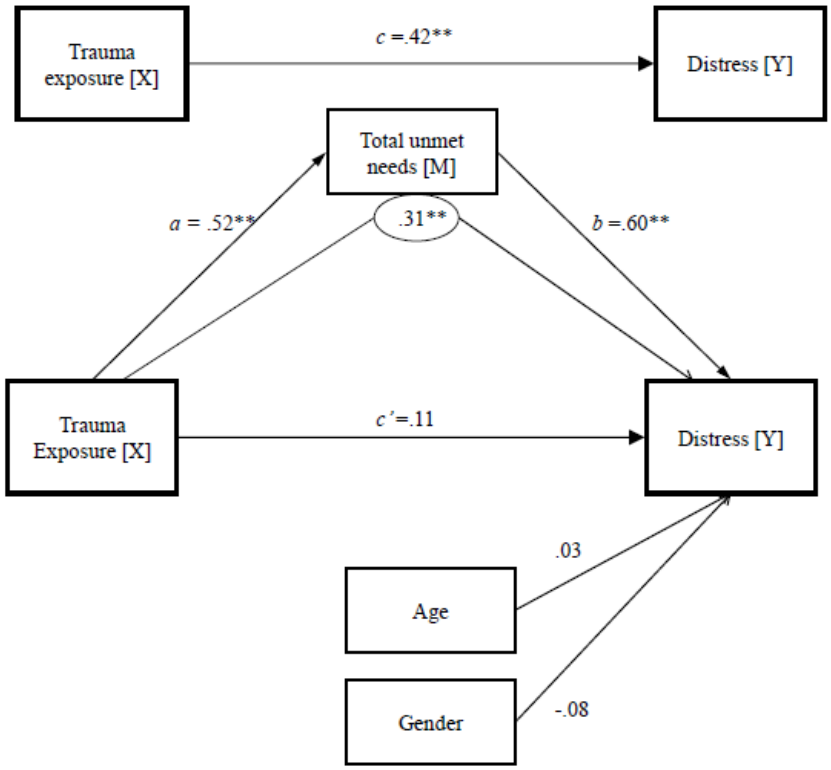
Model 1 Total effect of number of past traumatic events (without mediator)[1]	**Jordan (n=269)** ***Effect; (95% CI)***	**Haiti (n=279)** ***Effect; (95% CI)***	**Nepal (n=269)** ***Effect; (95% CI)***
Number of past traumatic events	0.42; (0.3, 0.54)	0.2; (0.08, 0.32)	0.32; (0.22, 0.42)
Age	-0.02; (-0.13, 0.09)	0.14; (0.02, 0.25)	0.34; (0.24, 0.45)
Gender	-0.02; (-0.14, 0.09)	0.2; (0.07, 0.32)	0.21; (0.11, 0.32)
Model 2a Direct Effects			
Direct effect of trauma and co-variates			
Number of past traumatic events (c'-path)	0.11; (-0.01, 0.23)	0.16; (0.02, 0.3)	0.2; (0.08, 0.32)
Age	0.03; (-0.07, 0.13)	0.12; (0, 0.24)	0.33; (0.23, 0.43)
Gender	-0.08; (-0.18, 0.02)	0.19; (0.07, 0.31)	0.25; (0.15, 0.35)
Direct effect of potential mediator			
Number of perceived unmet needs (b-path)	0.6; (0.48, 0.72)	0.1; (-0.04, 0.24)	0.26; (0.14, 0.38)
Model 2b Indirect Effect			
Number of perceived unmet needs	0.31; (0.24, 0.39)	0.04; (-0.01, 0.1)	0.12; (0.06, 0.19)

[1] Standard multivariate regression with the predictor (number of past traumatic events) and the co-variates (gender and age).

Table taken in slightly adapted form from [305].

These models are now presented in more detail for each of the study sites. Figure 6.1 shows the mediation model for the Jordan sample. There was a significant indirect effect via perceived unmet needs, with a significant association both between number of past traumatic events (the predictor) and number of perceived unmet needs (the assumed mediator) (*a* path), as well as between number of perceived unmet needs and symptoms of common mental disorder (distress) (*b* path). The association between number of past traumatic events and symptoms of common mental disorder was no longer statistically significant (*c'*=0.11) when accounting for this indirect effect of perceived unmet needs (r=0.31). Age and gender were not found to be significant covariates in predicting symptoms of common mental disorder in this model. The adjusted R^2 was 0.44 for symptoms of common mental disorder in the tested model, i.e. 44% of the variance in symptoms of common mental disorder could be explained by the tested mediation model.

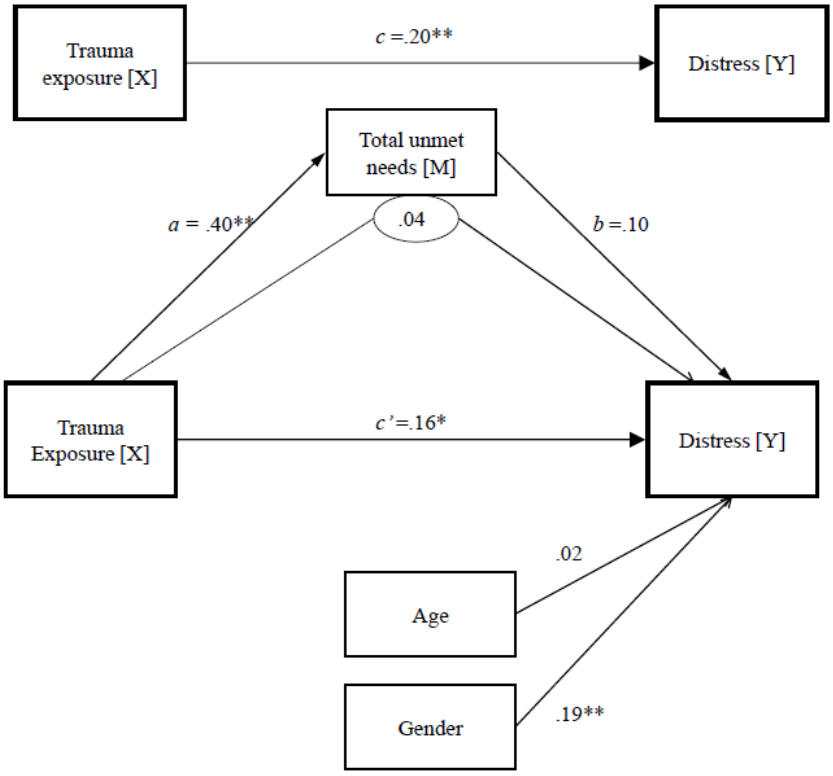
Figure 6.1 Mediation model for the Jordan sample (n=269)



Note. *p<.05, **p<.001; bootstrap re-samples=5000
Figure taken from [305].

Figure 6.2 shows the mediation model for the Haiti sample. In this sample, a mediation effect for number of perceived unmet needs could not be confirmed; even though a statistically significant association was found between number of past traumatic events and number of perceived unmet needs, the association between number of perceived unmet needs and symptoms of common mental disorder (distress) was not significant. Furthermore, the indirect effect of number of perceived unmet needs was not statistically significant in the tested model (r=0.04). However, there was a trend towards mediation in this sample, as there was a clear reduction in the strength of association between number of past traumatic events and symptoms of common mental disorder when number of perceived unmet needs were entered into the model (i.e. from *c'*=0.20 to *c'*=0.16). Additionally, female gender significantly predicted symptoms of common mental disorder, whilst the age covariate did not. The adjusted R^2 was 0.08 for symptoms of common mental disorder in the tested model, demonstrating that the model explained relatively little of the variance, only 8%.

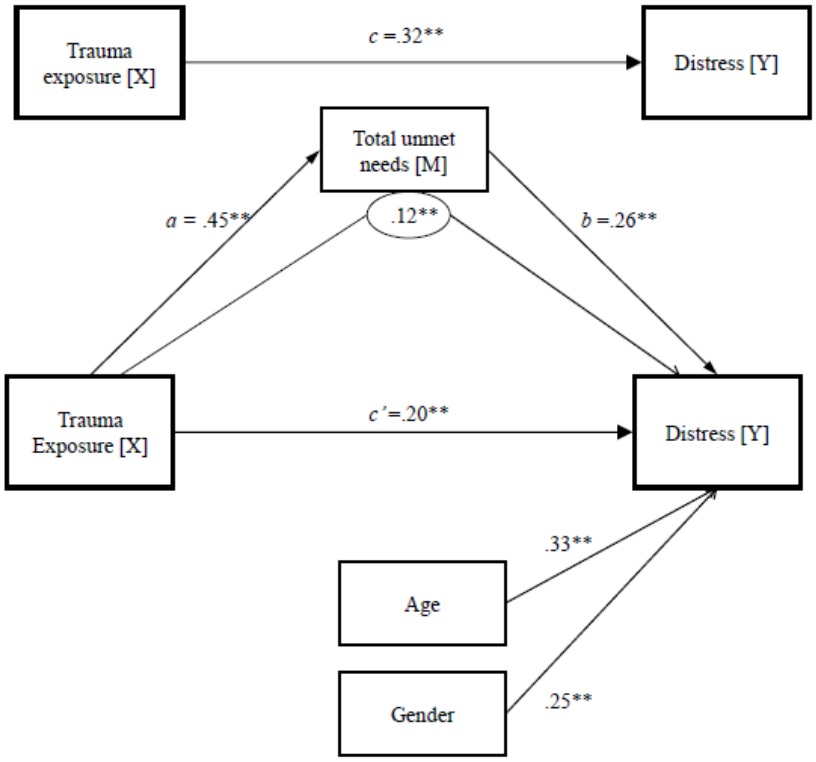
Figure 6.2 Mediation model for the Haiti sample (n=279)



Note. *p<.05, **p<.001; bootstrap re-samples=5000; figure taken from [305].

Figure 6.3 displays the mediation model for the Nepal sample. Similar to the analyses from Jordan, there was an indirect effect of number of past traumatic events on symptoms of common mental disorder (distress) via number of perceived unmet needs; there was a statistically significant association between all of the variables in the model, including number of perceived unmet needs, number of past traumatic events, symptoms of common mental disorder, as well as the gender and age covariates. When the indirect effect of number of perceived unmet needs was included in the model, there remained a direct effect – though reduced – of number of past traumatic events on symptoms of common mental disorder; the direct effect regression coefficient between number of past traumatic events and symptoms of common mental disorder was decreased from a total effect (*c* path) of r=0.32 to an adjusted effect (*c'* path) of r=0.2. Number of past traumatic events therefore predicted symptoms of common mental disorder directly as well as indirectly through number of perceived unmet needs. In addition, older age and female gender were found to be independent predictors of symptoms of common mental disorder. The adjusted R^2 was 0.34 for symptoms of common mental disorder in the tested model, i.e. 34% of the variance in symptoms of common mental disorder could be explained by the tested mediation model.

Figure 6.3 Mediation model for the Nepal sample (n=269)



Note. *p<.05, **p<.001; bootstrap re-samples=5000
Figure taken from [305].

6.4 Discussion

Findings

HESPER Scale as measure of perceived needs

This study confirmed that the HESPER Scale is a practical humanitarian tool in measuring perceived needs. The scale was able to provide data on the total number of perceived unmet needs in three diverse populations affected by humanitarian emergencies (displaced Iraqi people in Jordan, earthquake-affected people in Haiti, and Bhutanese refugees in Nepal), as well as providing comparative ranked data on individual need items in the three study sites (including items listed on the HESPER Scale, as well as any additional unmet needs named by participants that were not already listed on the HESPER Scale).

The total number of perceived unmet needs was by far the highest in Haiti (where all HESPER items were rated as unmet need by at least half of participants), and lowest in Nepal, giving an indication of the differential level of needs in the three study sites. The HESPER item that stood out most across the three settings was 'Income or livelihood'; the item was rated as unmet need by the majority of participants, and was rated as one of their three most serious problems by around half of participants, in all three settings. Other items that were in the top ten of unmet need ratings in all of the three sites were 'Place to live in', 'Distress', 'Separation from family members', and 'Being displaced from home'; items that were in the top ten of priority ratings in all of the three sites included 'Place to live in', 'Physical health', and 'Health care'. There was generally great variation in ratings (both for need ratings and priority ratings) between the three settings for most other need items, as well as for any additional unmet needs listed by participants, suggesting that the HESPER Scale is able to tease out the needs that are considered to be unmet within different populations, as well as those which are felt to be the most serious.

Between-gender differences in perceived needs

Contrary to expectations, there were no differences between men and women in the total number of perceived unmet needs in any of the three study sites (as well as in the total number of past traumatic events). In addition, there were gender differences only for a few individual need items across settings; the only HESPER item for which there were significant gender differences in more than one of the three study sites were in priority ratings for 'Drinking water' (significantly more women than men rated this as one of their three most serious problems in Jordan and Nepal, but not in Haiti). This suggests that, even though there may be some gender specific needs, which may be influenced by the culture within which the person lives, overall men's and women's perceived unmet needs in humanitarian settings appear to be remarkably similar. However, this finding should be interpreted cautiously, as the only need item in the HESPER Scale which specifically relates to a particular gender ('Safety or protection from violence for women in your community') is phrased on the community-level, and individual-level gender differences may have been masked for this item. Furthermore, there were relatively few men in the Haiti sample, so the study may not have had the statistical power to detect gender differences in Haiti. Thus, further research in a wider range of settings and population groups is necessary to draw more substantial conclusions on the impact of gender on need in humanitarian settings.

Perceived unmet needs, past traumatic events, and symptoms of common mental disorder

The HESPER Scale was also able to generate data that facilitated the assessment of the relationship between perceived unmet needs and mental health outcome. As hypothesized, in all three study sites, number of perceived unmet needs and number of past traumatic events both correlated positively with symptoms of common mental disorder; participants with a higher number of perceived unmet needs reported significantly more symptoms of common mental disorder than those with a lower number of perceived unmet needs, and those who reported a higher number of past traumatic events also had significantly more symptoms of

common mental disorder than those with a lower number of past traumatic events. This is in line with previous research, which has found that both the post-disaster environment (i.e. current unmet needs) (e.g. [10, 115, 116, 119]) and past experience of trauma (e.g. [120, 149, 150]) may be predictive of poor mental health outcome. There was also a significant association between perceived unmet needs and past traumatic events in all three study sites.

However, these simple correlation analyses were not able to inform on the nature of the relationship between perceived unmet needs, past traumatic events, and symptoms of common mental disorder. Based on a previous mediation model that had been postulated by Miller and Rasmussen [36, 94] (see Section 2.5.3 for further details; also see below), mediator analyses were therefore performed to assess whether there were indirect effects of past traumatic events on symptoms of common mental disorder via current perceived unmet needs. This was confirmed for both the Jordan and Nepal samples, yet not for the Haiti sample. Whilst in Nepal there was still a significant direct effect of number of past traumatic events on symptoms of common mental disorder even when accounting for the indirect effects of number of perceived unmet needs, in Jordan the direct association between number of past traumatic events and symptoms of common mental disorder was no longer significant when accounting for the indirect effects of number of perceived unmet needs. In the Haiti sample, although there was a tendency towards a mediation effect, the statistical requirements for this were not met, since even though the association between number of past traumatic events and number of perceived unmet needs was significant in the mediation model, the association between number of perceived unmet needs and symptoms of common mental disorder was not; also the indirect effect of number of perceived unmet needs was not statistically significant.

The findings from Jordan and Nepal are consistent with previous research [161, 163], in particular with Miller and Rasmussen's mediation model [36, 94], which postulates that daily stressors mediate the relationship between past traumatic

experiences and mental health outcome in conflict and post-conflict settings, and which advocates an increased focus on ongoing stressors arising from current difficulties and challenges that life poses compared to a focus largely on past traumatic exposure. The findings of this study support this model in that the addition of current perceived unmet needs (representing daily stressors) to the mediation model increased the overall explanatory power and weakened the direct association between past traumatic events and symptoms of common mental disorder. The results also suggest that Miller and Rasmussen's model may be extended beyond conflict and post-conflict settings to include wider humanitarian settings. Additionally, the results tie in with previous studies that have emphasized the importance of post-displacement stressors compared to past traumatic experiences in predicting mental health outcome, both in post-emergency settings themselves [162, 312], as well as amongst refugees and asylum seekers living in other countries, including Western ones [127, 133, 160].

However, these results should be interpreted cautiously. Indeed, within the employed mediator model causality can only be assumed, since causality cannot be fully established within cross-sectional studies such as this one. It is therefore possible that poor mental health influenced the reporting of past traumatic events and the perception of current unmet needs, potentially reversing causality within the mediator model. However, as some of the current unmet needs assessed in this study (such as large-scale displacement from home) could not have been caused by poor mental health, and as previous longitudinal studies have also shown daily stressors (or current unmet needs) to be predictive of poor mental health outcome [127], this strongly suggests that past traumatic events and current perceived unmet needs predicted mental health outcome rather than vice versa. Nevertheless, this will need to be assessed further within future – ideally longitudinal – research.

Furthermore, in Haiti number of perceived unmet needs did not significantly mediate the association between number of past traumatic events and symptoms of common mental disorder. One explanation for this may be that the

traumatic events experienced in Haiti were probably much more recent (i.e. events relating to the earthquake eight months previously) compared to those in Jordan and Nepal (which may have occurred years before). This ties in with previous research which found that exposure to past traumatic events as risk factor for poor mental health outcome decreased as the length of time since conflict or resettlement increased [120, 150]. A further possibility is that the results had limited validity in Haiti, for example either due to response bias or interviewer bias, or because of translational issues (see 'Limitations' section below for further details); indeed, although internal consistency of the HESPER Scale was adequate in the three study sites, it was lower in Haiti than in the other two samples (see Chapter 5 on the psychometric properties of the HESPER Scale for these results), which suggests that the use of a total score of perceived unmet needs may not have been as appropriate in the Haiti sample as in the other two sites. Internal consistency of the GHQ-12 and traumatic events list of the CIDI were also lower in Haiti than in the other two settings. Whilst the results of this study therefore provide further support for the importance of current unmet needs in explaining the association between past traumatic exposure and mental health outcome in humanitarian settings, further research across different contexts, as well as research that includes additional covariants such as time since trauma, and research that is longitudinal in nature, is required to shed more light on this association.

The finding that numerous individual need items of the HESPER Scale predicted symptoms of common mental disorder in all three study sites (particularly in the Jordan sample), and more so than the individual past trauma items of the CIDI, provides further support for the impact that current perceived unmet needs may have on mental health outcome in humanitarian settings compared to past traumatic events. Whilst over half of HESPER items predicted poorer mental health outcome on average across the three study sites, only around a quarter of individual CIDI items did so on average across the three settings, and none of the CIDI items consistently predicted mental health outcome across the three sites. However, it is possible that for those CIDI items where relatively few participants

had experienced the event (especially the very extreme events) the absence of a statistically significant difference between participant ratings was due to a lack of statistical power. This warrants further investigation.

When looking at the HESPER data across study sites, it was a few basic need items which consistently predicted poorer mental health outcome in all three settings, in particular those relating to health (including physical health and health care, as well as clothes, shoes, bedding and blankets); many of the need items which were linked to poorer mental health outcome in two of the three settings also related to basic needs (for example those relating to food, shelter, toilets, income and livelihoods). This suggests that it may be primarily basic needs which are universally linked to mental health, and that the relationship between other less basic needs and mental health outcome may be more culture-specific. This is in line with previous research amongst Darfuri refugees living in refugee camps in Eastern Chad, which found that safety and basic needs were more strongly linked to psychological distress than material loss or war-related past traumatic events [163]. However, more research is required to test these exploratory findings further.

The finding that older age (in Nepal) and female gender (in Haiti and Nepal) independently predicted symptoms of common mental disorder in some, but not all, settings (both within the individual between-group analyses as well as the mediator analyses) fits in with the inconsistent results previous research has produced, i.e. that the two variables, in particular female gender, have been found to be predictive of mental health outcome in some studies [116, 118, 133, 139], but not in others [116, 120, 139]. For example, whilst one large meta-analysis of studies comparing refugee groups to non-refugee groups found that both female gender and older age predicted poorer mental health outcome [133], another meta-analysis found no gender effect amongst adult populations exposed to conflict or displacement [120] (see Section 2.5.2 for further details). An explanation for this may be that both older age and female gender as risk

factors for poor mental health outcome may be context-dependent, for example according to culture, population group, or type of mental health outcome.

Limitations

This study had several limitations, some of which have already been discussed. A few of these related to the representativeness of the samples. One of these was due to the sampling methodologies used, in particular that random-walk methods were employed in Jordan and Haiti to recruit households within clusters and camps respectively, and that camps were purposively selected into the study in Haiti. Response rates in Jordan were also low. These methodological issues may have resulted in a biased selection of households into the study, which could have skewed results, so that they were not generalisable to the study populations at large [105]. However, as there was no complete list of households or individuals available in Jordan and Haiti, other sampling methods that are less prone to bias were not feasible. Furthermore, in Haiti, quite a high percentage of people (relative to camp size) were interviewed, which should have resulted in a wide spread of participants within camps having been included into the study.

A further limitation which related to the representativeness of the samples was that men were underrepresented in Haiti. One possible, though hypothetical, partial explanation for this may be that men might have been more likely to be absent from their homes during the day when data collection had to take place due to security issues. Although the underrepresentation of men in the study may have biased results, as there were few differences between genders, and as response rates were very good in Haiti, any such bias is likely to have had minimal implications for the findings made. Furthermore, the three country samples appeared to be balanced in regards to all other demographic variables.

Accessibility bias is another potential problem which is common in humanitarian settings [269], and which relates to the representativeness of samples. This refers to the possibility that groups or individuals who can be contacted in such contexts may be those who have better access to resources such as health care

or aid interventions than those who are not represented. This may give a biased picture of the population's needs. However, the use of random probability sampling methods in this study should have reduced this bias.

Another limitation was that only one mental health outcome was employed – symptoms of common mental disorder –, and in particular that post-traumatic stress disorder (PTSD) was not measured. Previous studies and reviews have found exposure to past traumatic experiences to be a potent risk factor for PTSD [120, 141, 160] (and they are indeed one of the diagnostic criteria for the disorder [313]), and this study was not able to address the effects that current perceived unmet needs may have on the relationship between past traumatic events and PTSD symptoms. However, the aim of this study was not to assess the effect of perceived unmet needs on diagnostic mental health outcomes, but rather on the continuous range of distress symptoms that are so common in humanitarian settings, thereby avoiding some of the challenges in classification that exist in measuring mental disorders (though some of the methodological issues remain, for example in using measurement tools that were developed in Western settings, potentially giving rise to measurement error) (see Section 2.5.1 for further details). Furthermore, exposure to past traumatic events has been found to be able to explain less of the variance in symptom severity for mental health outcomes other than PTSD, including depression and distress [36], which opens up the question of what other factors may be able to account for the large percentage of the variance that remains unexplained for these mental health variables.

A further possible limitation in this study was that the multiple testing employed during the between-group analyses of individual HESPER and CIDI items may have resulted in false positive errors (i.e. Type-1 errors). Indeed, the finding from these analyses that those participants in Haiti who rated the item 'Burying and mourning the dead in your community' as 'no need' reported significantly more symptoms of common mental disorder than those who rated the item as 'unmet need' is difficult to explain; it is plausible that the finding was due to chance,

since even with the conservative significance level of 1% that was used, there was a 1 in 100 chance of a result appearing as statistically significant due to chance alone. As this item was included in Haiti only, this hypothesis is difficult to test. However, this HESPER item was the only one across the three settings for which a 'no need' rating was significantly linked to poorer mental health outcome than an 'unmet need' rating (for all other significant differences, the opposite was the case), suggesting that false positive errors were kept to a minimum. The use of a conservative significance level may have helped towards this.

Moreover, it is possible that response bias may have led to some inaccuracies in the data due to false reporting by participants, for example because participants did not feel comfortable admitting to sensitive current unmet needs or past traumatic events experienced. This may have been amplified by the fact that Jordanian rather than Iraqi interviewers were employed in Jordan, which may have diminished participants' trust towards them. However, participants in all three study sites reported exposure to a wide range of traumatic events, suggesting that participants largely did feel comfortable responding truthfully. Conversely, it is possible that some participants may have overestimated the seriousness of their needs, as well as their past traumatic experiences, and their levels of distress (i.e. they may have had the tendency to respond affirmatively to questions), which could have led to an exaggeration in the strength of associations between the three variables. Recall bias, which may lead to inaccuracies in participants' responses especially in non-longitudinal studies (including cross-sectional studies such as this one) where participants are asked to recollect events, and interviewer bias, which is always a risk when interviewers are involved in the study process, are also possibilities [103]. Further research across different settings is therefore required to substantiate the results of this study.

Finally, there may have been some inaccuracies in the data due to methodological issues in the translation of data and project materials. Indeed,

back-translation methods were not employed in Haiti. However, such methods were used in Jordan and Nepal, which should have reduced any inaccuracies in these two settings (see Sections 4.4.5 and 5.6 for a more detailed discussion on translational issues).

Conclusion

This study used the newly developed HESPER Scale as a measure of perceived needs. The scale showed itself to be useful both as a practical humanitarian tool in measuring perceived needs across different populations and their sub-groups (in particular by gender), as well as being able to provide data that can be used to assess the relationship between perceived unmet needs and mental health outcome, in particular the relationship between perceived unmet needs, exposure to past traumatic events and symptoms of common mental disorder. The study thereby completed the second and final aim of this thesis, as laid out in Section 1.1. The next chapter (Chapter 7) gives a concluding overview of the findings from this thesis, as well as implications of the findings for policy and practice, and suggestions for future work.

CHAPTER 7

Discussion and Conclusions

7.1 Overview of findings

The Humanitarian Emergency Settings Perceived Needs (HESPER) Scale was successfully developed over three phases. This entailed first the development of a first draft scale through a process of item generation and item reduction during the author's MSc at the Institute of Psychiatry (IoP), King's College London (KCL) (see Section 3.7 and Appendix E1), second the further development and pilot-testing of the draft scale in small samples in relevant populations (see Chapter 4), and third field-testing of the scale in larger samples in three diverse populations affected by humanitarian emergencies in low- and middle-income countries (see Chapter 5). The description of the development and testing of the HESPER Scale fulfilled the first aim of this thesis, as laid out in the introductory chapter (see Section 1.1).

The HESPER Scale also proved itself to be useful as practical humanitarian tool in measuring perceived needs amongst diverse populations affected by humanitarian emergencies, as well as amongst sub-groups of these populations (in particular by gender) (see Chapter 6). In addition, the scale was able to provide data on perceived needs that predicted mental health outcome in these settings, by its inclusion in a study to explore the relationship between symptoms of common mental disorder (i.e. symptoms of depression and anxiety), current perceived unmet needs and past traumatic experiences, in particular the role of perceived unmet needs in explaining the association between traumatic exposure and symptoms of common mental disorder (see Chapter 6). These findings related to the second aim of this thesis (see Section 1.1) – an examination of the HESPER Scale's application in measuring perceived needs and in providing data to predict mental health outcome within populations affected by humanitarian emergencies.

The findings and limitations for each part of the HESPER project are described in detail in the 'Discussion' sections of individual chapters. This chapter provides a concluding overview of the findings, structured according to the criteria of the HESPER Scale and the hypotheses of the thesis, as well as implications of the findings for policy and practice, and suggestions for future work.

7.1.1 Criteria of HESPER Scale

Several criteria were set for the HESPER Scale at the beginning of the HESPER project, as outlined in Section 3.2, all of which were met. These related to the first aim of this thesis – the description of the development of the HESPER Scale –, as well as to parts of the second aim, i.e. the scale's application in measuring perceived needs. These are now discussed in turn.

The HESPER Scale is valid and reliable

As discussed in Chapter 5, the HESPER Scale showed itself to have strong psychometric properties across a diverse range of populations affected by humanitarian crises in Jordan (displaced Iraqi people), Haiti (people displaced following a large-scale earthquake), and Nepal (Bhutanese refugees). Inter-rater reliability was very good to excellent in each of the three field-sites, and test-retest reliability was very good in one of the two settings in which it was assessed, and adequate in the other. Internal consistency, which is a weaker indicator of a scale's reliability, was also adequate to very good across the three field-sites. Additionally, there was support for validity of the HESPER Scale; whilst criterion (concurrent) validity of the scale was demonstrated by comparing HESPER items to related questions of both a quality-of-life instrument [271] and distress scale [272] (see Chapter 5 for further details), content validity and face validity were established through participant surveys and focus group discussions with populations affected by humanitarian crises during previous pilot-testing of the draft scale in Jordan (displaced Iraqi people), Gaza and Sudan (local populations) (see Section 4.4 for further details), an interviewer survey in these

settings, as well as through an earlier survey with humanitarian experts conducted during the author's MSc (see Section 3.7 and Appendix E1 for further details).

The HESPER Scale can be completed rapidly

The goal was for the HESPER Scale to be completed rapidly, between 15 and 30 minutes on average. This was accomplished in each of the three settings in which the scale was field-tested – on average, the scale took around 15 minutes to complete in Jordan, around 21 minutes to complete in Haiti, and 22 minutes in Nepal; across the three sites it took just under 20 minutes to complete (see Chapter 5 for results). The ability to rapidly acquire needs data is beneficial in humanitarian settings, where time is often of the essence within emergency response.

The HESPER Scale can be easily self-learned and used on the basis of a self-training manual by local staff

An interviewers' training manual was developed alongside the HESPER Scale (see Section 4.2.2 for further details), to enable use of the scale in the field by local staff. Local interviewers in each of the three settings in which the HESPER Scale was pilot-tested, as well as at the three sites in which the scale was field-tested, were easily able to use the HESPER Scale based on this manual, and no extensive training was required; local collaborators in the three pilot-sites and three field-sites were sufficiently able to rapidly train interviewers on the use of the scale over one to one-and-a-half days (including a pilot-trial) based on the information given in the manual. Furthermore, interviewers in each of the three pilot-sites indicated that they found the manual to be intelligible, of an adequate length, useful and helpful (see Section 4.4 for further details). The satisfactory reliability results of the HESPER Scale (see Chapter 5; also see sub-section above) provided further support for the adequacy of the interviewers' training manual, since the reliability of a scale reflects to some extent how well interviewers are trained.

The finding that local interviewers who were not familiar with the HESPER Scale were easily able to administer the scale without having attended lengthy training sessions is of an advantage in humanitarian contexts, as there is usually a high turnover of staff in emergency settings [9], and humanitarian organizations often do not have the time or resources to extensively train their staff [61]. It is therefore hugely beneficial for a needs assessment tool to be able to be learned quickly. Indeed, nutrition and mortality surveys which are commonly conducted in humanitarian emergencies (see Section 2.3.4) often require technical expertise and experience, which can be a problem in light of the lack of experienced, suitably qualified and well-trained staff that is common in such contexts [9, 48, 49].

In addition to the interviewers' training manual, a longer manual for supervisors or project leaders was developed following the HESPER Scale's finalization (see Appendix F3 for manual**;** also see [167]). This manual contains the HESPER Scale and interviewers' training manual, as well as providing detailed additional information on the assessment procedures required, including procedures before, during and after HESPER interviews (for example, details on sampling, sample size calculations, the recruitment and training of interviewers, the dissemination of results, and safety concerns). The manual was designed to be sufficient for project leaders to be able to successfully manage a whole HESPER assessment without any additional training from outside sources.

<u>The HESPER Scale is culturally applicable to a wide range of populations and contexts in humanitarian emergencies in low- and middle-income countries</u>

The HESPER Scale was successfully pilot-tested and field-tested in diverse populations affected by humanitarian emergencies, indicating that the scale is applicable and feasible in a wide range of humanitarian settings. In line with the criteria set out for the HESPER Scale (see Section 3.2), these included both low-income (Haiti, Nepal) and middle-income (Gaza, Jordan, Sudan) countries [314]; acute (Haiti) and chronic situations (Gaza, Jordan, Nepal, Sudan); urban (Gaza, Haiti, Jordan, Sudan) and rural (Haiti, Nepal, Sudan) settings; camp (Haiti, Nepal)

and community (Gaza, Jordan, Sudan) contexts; as well as those caused by natural disasters (Haiti), and those following war or conflict (Gaza, Jordan, Nepal, Sudan) (see Section 4.4 and Chapter 5). What is more, during pilot-testing of the draft HESPER Scale in Jordan, Gaza and Sudan, as well as during pre-testing of the draft scale in the United Kingdom (UK) with refugees from the Democratic Republic of the Congo (DRC), participants and interviewers indicated that they found the scale to be intelligible, comprehensive, culturally applicable, and useful (see Sections 4.3 and 4.4 for further details), providing further support for the scale being relevant and culturally applicable across a wide range of humanitarian settings and populations.

The HESPER Scale is usable within different phases, including in the midst of a humanitarian crisis

The HESPER Scale's applicability to different phases of a humanitarian crisis was demonstrated during pilot-testing and field-testing of the scale, where it was used in a wide range of population groups affected by humanitarian emergencies, including in both acute and chronic contexts (see paragraph above). Although in Haiti the earthquake had occurred eight months prior to the field-study, the acuteness and intensity of the crisis was still very much evident. In Gaza also, even though the situation overall is protracted, the crisis had in no way subsided at the time of the pilot-study, suggesting that the HESPER Scale is applicable not only in the later stages of a humanitarian emergency, but also in the midst of a crisis. However, the HESPER Scale should be used and tested in further humanitarian settings, to establish its usefulness and feasibility in as many contexts as possible.

The HESPER Scale assesses the perceived needs of affected populations across multiple domains, including physical, social, and psychological needs

The final list of items included in the HESPER Scale covered a wide range of needs, including physical needs (for example 'Drinking water', 'Food', 'Place to live in', and 'Toilets'), social needs (for instance 'Support from others', 'Separation from family members', and 'Care for people in your community who

are on their own'), and psychological needs (such as 'Distress', and 'Mental illness in your community'). What is more, participants and interviewers during pilot-testing of the scale in Jordan, Gaza and Sudan (see Section 4.4), as well as participants of an earlier humanitarian expert survey (see Section 3.7 and Appendix E1), found the list of HESPER items to be comprehensive, which hints towards the scale being multi-sectoral in nature (i.e. addressing needs across humanitarian sectors), in line with the integrative 'mental health and psychosocial framework' which is now often advocated within humanitarian emergency response (see Section 2.3.3 for further details on this framework; also see sub-section below).

The HESPER Scale can be administered to representative samples and can identify perceived needs on the population or sub-population level

The HESPER Scale was successfully administered to representative samples during field-testing of the scale in Jordan, Haiti and Nepal, where it proved itself to be useful as a humanitarian needs assessment tool in measuring perceived needs not only on the population level, but also on the sub-population level. In this study, results on perceived needs were presented on the population level for each of the three study sites, and between-group analyses were performed according to different sub-groups in the population, in particular by gender. These analyses showed that there appeared to be no significant gender differences in the number of perceived unmet needs in the three study sites, and that there were very few gender differences for individual HESPER need items across the three sites (see Chapter 6 for further details; also see Section 7.1.2 below).

The HESPER Scale is able to incorporate locally-specific items

The HESPER Scale demonstrated its ability to incorporate need items that are locally developed and specifically relevant to the local context during field-testing of the scale in Jordan and Haiti. In Jordan, an item on 'Residency or resettlement' was included alongside the scale's 26 universally relevant core items, based on the results from previous pilot-testing of the scale in Jordan that

this was a common problem in this setting. In Haiti, an item on 'Burying and mourning the dead in your community' was added to the HESPER Scale, following field-observations by the local collaborating agency that this was an important item to include in this setting (see Chapters 5 and 6 for further details). The level of perceived needs for both of these items was established in the same way as for each of the core need items, providing evidence for the ease with which locally-specific items can be incorporated in the HESPER Scale.

The HESPER Scale is consistent with policies by the World Health Organization (WHO) and guidelines by the Inter-Agency Standing Committee (IASC)

In recent years, an integrative 'mental health and psychosocial' framework has often been recommended in humanitarian settings. One prominent advocate for this approach has been the IASC's *Guidelines on Mental Health and Psychosocial Support in Emergency Settings* [1], which considers mental health and psychosocial needs to be diverse, and which consequently views a successful 'mental health and psychosocial' support structure as including a broad range of complementary social and mental health interventions to meet the needs of different groups (see Section 2.3.3 for further details). Experts at WHO also agree with this broader approach [38, 39]. The framework has a bearing on the assessment of needs in humanitarian settings, in that it promotes a wider range of needs to be assessed across humanitarian sectors, i.e. not only those directly relating to a person's mental health, but also to other psychological and social issues. The HESPER Scale is consistent with this framework in that it assesses a broad range of needs across multiple sectors, including psychological, physical and social ones (see sub-section above).

Furthermore, the IASC Guidelines, along with several other humanitarian organizations and experts, have made consistent recommendations for the increased participation of affected populations [1, 79-81] and for perceived needs to be used as key indicators within humanitarian assessment and emergency response [1, 8, 48-50, 56, 65, 76-78] (see Section 2.3.5 for further details). Indeed, perceived needs are considered to be a key determinant of

psychosocial well-being [1]. The HESPER Scale directly addresses this by assessing the perceived needs of affected populations, thereby facilitating the use of affected populations' views within humanitarian response.

In addition, the WHO have recommended that rapid needs assessments to determine problems that exist within emergency-affected populations are essential in enabling effective and efficient emergency relief [7]. The HESPER Scale addresses this by being able to rapidly provide population-based data on perceived needs.

7.1.2 Hypotheses of thesis

The hypotheses of this thesis related to its second aim (see Section 1.1), i.e. the exploration of the HESPER Scale's application in measuring perceived needs and in providing data to predict mental health outcome within populations affected by humanitarian emergencies. This was addressed in Chapter 6 of this thesis. To avoid undue repetition, findings are discussed in brief only in the paragraphs below; further details can be found in Chapter 6.

The first hypothesis postulated that women would have a higher number of, and different, perceived unmet needs (as measured by the HESPER Scale) compared to men. This could largely not be confirmed in any of the three study sites (in Jordan with displaced Iraqi people; in Haiti with people displaced following a large-scale earthquake; and in Nepal with Bhutanese refugees). There were no gender differences in the total number of perceived unmet needs in any of the three settings, and there were gender differences only for very few of the HESPER Scale's 26 individual need items in each of the three sites. Although this suggests that perceived needs appear to be remarkably similar overall across the two genders in humanitarian settings, further research is required to substantiate these findings.

The second hypothesis maintained that participants with a higher number of perceived unmet needs would have more symptoms of common mental disorder than those with a lower number of perceived unmet needs. This was confirmed in each of the three study sites, where the number of perceived unmet needs correlated positively with symptoms of common mental disorder. However, within a mediation model that was performed which included past traumatic events as predictor variable, and gender and age as covariates, the association between perceived unmet needs and symptoms of common mental disorder reached statistical significance only in the Jordan and Nepal samples, but not in the Haiti sample. These findings suggest that the relationship between perceived needs and mental health outcome may not be as straightforward as the hypothesis postulated, but may possibly in part be dependent on the context within which the association is being tested (see paragraph below on the first of two secondary research questions for a more detailed discussion of these findings).

The third hypothesis stated that participants with a higher number of past traumatic events would have more symptoms of common mental disorder than those with a lower number of past traumatic events. This was corroborated in all three study sites. Number of past traumatic events correlated positively with symptoms of common mental disorder in all three settings, and this was maintained even when the analyses were repeated within the mediation model already mentioned in the paragraph above. However, perceived unmet needs were found to have a substantial impact on the association between past trauma exposure and mental health outcome, as is discussed in the next paragraph.

In addition to the three main hypotheses just discussed, this thesis also explored two secondary research questions. The first of these investigated how much of the relative variance in symptoms of common mental disorder could be explained by perceived unmet needs, past traumatic events and gender, and what the nature of this interaction was. A mediator model was employed to

address this (already mentioned above), based on a previous model that had been postulated by Miller and Rasmussen [36, 94] (see Section 2.5.3 for further details on this model).

The mediator analyses showed that number of perceived unmet needs significantly mediated the relationship between number of past traumatic events and symptoms of common mental disorder in two of the three study sites (Jordan and Nepal), but not in the third site (Haiti), though there was a tendency towards mediation in this setting also. These findings suggest that perceived unmet needs may weaken the direct association between trauma exposure and symptoms of common mental disorder, and may explain a large part of the variance of this association. Although the results in Haiti could have been due to methodological issues and so may have had limited validity, the results also support the possibility that the relationship between current perceived unmet needs, past traumatic events and symptoms of common mental disorder could potentially be dependent on the context within which they are being assessed. One possible explanation, which should be assessed further within future research, is that the mediating relationship may depend on how recently any past traumatic events were experienced, i.e. that the direct association between past trauma exposure and mental health outcome is stronger, the more recently the traumatic events were experienced [120, 150]. Gender (as well as age) as predictor variable for mental health outcome also appeared to be context-dependent, as it independently predicted symptoms of common mental health disorder in only two of the three study sites (Haiti and Nepal) (and for the age variable in Nepal only).

The final secondary research question explored whether participants with perceived unmet needs in any particular HESPER items would have more symptoms of common mental disorder compared to those who reported no need for the item. Between-group analyses revealed that many of the 26 individual need items of the HESPER Scale were significantly associated with

mental health outcome in each of the three study sites, and more so than the individual trauma items of the CIDI. Findings indicated that there might be a universal association between particular basic unmet needs (in particular those relating to affected people's physical health) and poorer mental health outcome, and that the relationship between other less basic needs and mental health outcome may be more context-dependent. However, these exploratory results will need to be assessed and substantiated further within future research.

7.2 Implications

7.2.1 HESPER Scale

The implications of the HESPER Scale are wide-ranging, and are discussed below. Elements of this have been published in modified form as part of a research paper on the development and psychometric properties of the scale, on which the author of this thesis had first authorship [168] (also see Appendix F1).

The HESPER Scale fills important gaps in the humanitarian field. The scale was shown to be applicable and useful across a wide range of humanitarian settings and populations during pilot-testing and field-testing of the scale, including amongst displaced Iraqi people in Jordan, internally displaced people following the 2010 earthquake in Haiti, Bhutanese refugees in Nepal, and the local populations in Gaza and Sudan.

The HESPER Scale enables the perceived problems of people living in humanitarian situations to be assessed quickly and reliably, based directly on their own views. It combines the strengths of survey research (i.e. representative samples) with that of participatory methods (i.e. measuring perceived needs) in that it quantifies the prevalence and distribution of people's perceived needs in representative samples of the general adult population in humanitarian settings in a reliable and valid manner. In line with recent calls for the increased participation of, and accountability towards, emergency-affected populations

within humanitarian needs assessments [80, 86, 88, 315], it thereby provides a more accurate picture of the serious problems with which the overall emergency-affected population wants help. It is also possible to provide an overview of perceived needs not only on a population level, but also to disaggregate results according to sub-groups in the population, for instance by gender, age, or ethnicity.

The HESPER Scale therefore opens up new avenues within humanitarian needs assessment by enabling rapid representative mapping and ranking of perceived needs as expressed by affected populations and sub-populations, and doing so with documented reliability and validity, unlike any other humanitarian needs assessment tool. This type of assessment gives a voice to affected populations to express what they consider to be their needs. The HESPER Scale thereby fills a gap within the multi-sectoral needs assessment field, allowing comparisons to be made between humanitarian organizations' and affected populations' views of what is needed, and therefore facilitating priorities for the most appropriate humanitarian response to be set.

However, although the HESPER Scale offers a method to produce information that can be used to prioritise and guide interventions within emergency relief, and to assess the impact of their implementation, it does not directly indicate what is required to respond to the identified needs, and does not provide solutions for them. Rather does the scale simply aim to identify those serious perceived problems that are common in a population. Thus, whilst the scale may facilitate important information on perceived unmet needs to be derived by humanitarian agencies, and may support organisation's decisions on what interventions to implement, it does not make direct recommendations for suitable interventions, nor the order and timeframe in which interventions should be delivered, and by whom; these decisions remain in the hands of the implementing agencies. Indeed, one of the most difficult parts of needs

assessments is translating the results into suitable interventions and policies [56], and the HESPER Scale is not able to directly address this.

The HESPER Scale may therefore not on its own be sufficient to fully understand people's perceived needs. In-depth participatory assessments such as key informant interviews or focus groups may be required in follow-up to HESPER assessments to better understand participants' expressed needs, and to decide what exact interventions and supports would be helpful within the local context [316]. It is possible that in some instances certain unmet needs cannot be successfully addressed, for instance because there is no suitable intervention or feasible solution available [23, 189], or due to a lack of resources [49]. However, good quality surveys and assessments can ultimately enable the efficient and effective design and implementation of interventions [61], and the HESPER Scale should be able to serve this purpose. Furthermore, although the scale is not able to function as an operational tool to give detailed feedback on the quality of interventions within sectors, in situations where interventions have started to respond to needs and affected populations still indicate that an area ranks high as need, it may give a strong indication that the response does not yet meet these needs.

Moreover, use of the HESPER Scale at one time point is not sufficient to understand the complexities of population needs. Needs assessments should be viewed and contextualised within the specific timeframe within which they are conducted; for this, it may be that the HESPER Scale can be used repeatedly over time, to identify shifts and trends in perceived needs, and to assess whether needs are being addressed adequately over time, in terms of the degree to which the humanitarian response is perceived by affected people to be meeting their needs. However, the scale's ability to do so will need to be assessed further within future research.

7.2.2 Perceived unmet needs and mental health

Within this thesis, the HESPER Scale has been shown to be applicable not only as a practical humanitarian needs assessment tool, but also to be able to provide data that can be used within mental health research. This entailed its inclusion in a study to assess the relationship between perceived unmet needs, past traumatic events, and symptoms of common mental disorder, further details of which are discussed in Chapter 6 and Section 7.1.2 above. Parts of the results (see Chapter 6), as well as the implications described below, were also published as part of a research paper on which the author shared joint first authorship [305] (also see Appendix F2 for paper).

The outcome of the study discussed in Chapter 6 has several implications for mental health policy and practice in humanitarian settings. The findings suggest that poor mental health (such as symptoms of common mental disorder) may be mediated by current perceived unmet needs in the post-emergency recovery environment, at least in some populations affected by humanitarian emergencies; that is, current unmet needs may have a substantial impact on the association between past trauma exposure and mental health outcome. If this is the case, it is highly plausible – and testable – that positive changes to the recovery environment may potentially attenuate the impact of past traumatic experiences on poor mental health. It follows that humanitarian action targeting perceived unmet needs across sectors may have a substantial effect in reducing, or in absence potentially worsening, mental health complaints experienced by emergency-affected populations [133, 166]. Based on these findings, it is also possible that meeting needs in the early phases of a crisis may have preventative effects for the onset of distress or mental disorder. As this would have large public health implications, this is an important area to be addressed within future research.

As has been advocated recently by several authors, and in line with the 'mental health and psychosocial framework' which has increasingly been promoted in humanitarian settings [1, 35, 36, 38, 39, 299] (see Section 2.3.3 for further details), the results of the study indicate that an integrative intervention approach may hold promise, which – rather than relying solely on resource-intensive trauma-focused interventions to mitigate the impact of traumatic exposure – both addresses current unmet needs in the recovery environment as well as psychological therapies. Multi-disciplinary interventions that aim to reduce current stressful social and material conditions caused or worsened by humanitarian emergencies may potentially buffer against the negative impact of traumatic experiences on an individual's mental health. Clearly, trauma-focused care is necessary for those suffering from severe post-traumatic stress complaints; there has been no research to date which suggests that the reduction of daily stressors can resolve serious persistent trauma [36]. However, the results confirm the need for a more integrated approach to diminish the impact of potential traumatic exposure on affected populations' mental health in humanitarian settings.

Depending on what needs are unmet in a population, psychosocial interventions may, for example, include family tracing and reunification services, interventions in schools, ensuring adequate housing and food, employment schemes, or family mediation therapies [40, 136, 147, 317]. Such integrative programs have indeed already been implemented successfully in several settings; for example, a psychosocial program incorporating psychological support, social assistance, and community outreach has been implemented amongst Iraqis living in Jordan and Lebanon [318]. Although this will be context-dependent, the results of the study suggest that addressing basic needs may be universally likely to improve mental health outcome, though this should be assessed further in future research.

7.3 Future Work

There have already been further developments in the application of the HESPER Scale since its finalization and publication. The scale has been endorsed by several influential humanitarian organizations, such as the Humanitarian Accountability Partnership (HAP) [258] (see Section 4.4.2 for further details on this organization), which has posted a link to the HESPER manual [167] on its website (see Section 5.5 for web address), as well as the Inter-Agency Standing Committee (IASC) Task Force on Needs Assessment (NATF) [75], which has included the 26 items of the HESPER Scale – in modified form – within its Multi-Cluster/Sector Initial Rapid Assessment (MIRA) Manual [319] (see Section 2.3.4 for further details on the IASC NATF and MIRA). There have also already been several requests to use the HESPER Scale following its finalization, including in South Sudan as research tool by the University of Oslo, and in Yemen by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) [320]; planning is also underway by a large humanitarian organization – 'World Vision' [321] – to collect data using the HESPER Scale in the first 72 hours following a humanitarian emergency, and to develop a smart phone application of the HESPER Scale, suggesting that the scale is a much-needed and useful practical humanitarian needs assessment tool.

However, further work across different settings would be useful to strengthen the evidence base for the adequacy and usefulness of the HESPER Scale. The scale is currently available in English, French, Spanish, Arabic, Nepali, and Haitian Creole, and it has been tested for its psychometric properties in Jordan (Arabic version), Haiti (Haitian Creole version) and Nepal (Nepali version). Although these include a wide range of humanitarian contexts, it would be useful for the scale to be translated and psychometrically tested in further humanitarian settings, to establish its psychometric properties in as many contexts as possible [103], and to facilitate its use in a wide range of population groups. To account for differences in culture and language, the scale's psychometric properties and cross-cultural applicability should be tested for each language version (including

the English, French and Spanish versions which have not yet been psychometrically tested) and in each setting within which the scale is used [187, 322, 323]. Since the validity of the test-retest reliability results were reduced during field-testing of the HESPER Scale in Nepal, this also highlights the need for more work to be conducted across different settings, to provide further evidence for inter-rater reliability, test-retest reliability, and validity of the HESPER Scale.

Furthermore, other more complex and less frequently applied ways in which to measure a scale's psychometric adequacy, such as item response theory, factor analyses or principal components analyses, which were beyond the scope of this thesis due to the limited timeframe of the author's PhD, may be valuable within future research in identifying underlying structures of associated HESPER items; this may, for example, be useful in considerations of which humanitarian clusters/sectors should address which groups of related HESPER need items (if unmet). Factor analyses and principal components analyses have indeed been applied to the Camberwell Assessment of Need (CAN) [225, 324, 325], on which the HESPER Scale was modelled (see Section 3.4 for further details on the CAN). An assessment of the HESPER Scale's sensitivity to change, which is a further indicator of an instrument's reliability, may also be useful, particularly when monitoring changes in perceived needs over time (see [103] for further details about these methods). In addition, it may be helpful for future research to include an exploration of construct validity of the HESPER Scale, in particular when working with total scores of unmet need.

In addition, the HESPER Scale has the potential to be adapted for use in different population groups, as has been done numerous times for the CAN [177, 178, 180, 181] (see Section 3.4 for further details), to enable use of the scale in as many population groups as possible. For example, so far, the HESPER Scale has only been tested in adult populations (though some of the HESPER items include concerns for participants' children), and it might be helpful for the scale to be adapted and tested amongst children and adolescents. Further population

groups who could potentially benefit from an adapted version of the scale include the elderly, disabled or other vulnerable minority groups, who may have specific needs in addition to those experienced by the general population at large in humanitarian emergencies.

Finally, the HESPER Scale should be applied further within mental health research, to better unravel the association between perceived unmet needs, past traumatic events, and symptoms of common mental disorder (and indeed other mental health outcomes) in humanitarian settings and populations. In line with a recent global exercise to identify research priorities for mental health and psychosocial support in humanitarian settings [82], future research should increasingly evaluate the distinctive pathways by which humanitarian crises impact on affected populations' mental health. Only once the mechanisms underlying the association between the current recovery environment, past trauma and mental health outcome are better understood in humanitarian settings will it be easier to match scarce resources with suitable interventions. Which particular psychosocial interventions may be beneficial in improving mental health outcome in humanitarian settings is another important area for future research that has not yet been sufficiently addressed [101, 326]; a recent review indeed showed that there are still large gaps in the evidence base for mental health and psychosocial interventions [326].

The HESPER Scale may therefore not only serve as a practical humanitarian tool in identifying and prioritising needs as perceived by the affected populations themselves, but may also make important contributions to the mental health research field. Hopefully the scale's practical application within relevant settings as well as its use within mental health research will ultimately go some way towards reducing the distress that is so common in humanitarian settings.

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Appendices

Appendices A –
Draft versions of HESPER Scale

APPENDIX A1

Humanitarian Emergency Settings Perceived Needs (HESPER) Scale – First draft version

Need rating: 0 = no problem 1 = met need 2 = unmet need 9 = not known	**Need rating**	**Order of priority** (unmet needs)
1. Alcohol (problems because of alcohol use by oneself or in one's family)		
2. Burials / funerals / disposal of human remains (problems with bodies of the deceased not being dealt with appropriately, problems in being able to carry out religious ceremonies for the deceased)		
3. Care of family members (problems in the ability to look after one's children, or elderly, disabled or very sick family members)		
4. Care of unaccompanied persons in the community (problems with the care for unaccompanied children, orphans, abandoned widows, abandoned people with physical and mental disabilities, and unaccompanied elderly in the community)		
5. Child protection (problems with one's children being unsafe / unprotected in the community; problems with one's children having a safe place to play)		
6. Clothing / Bedding (problems with access to clothing, shoes, bedding or blankets)		
7. Cooking items / facilities (problems in the ability to cook due to limited facilities or items)		
8. Daytime activities (problems due to idleness, or a lack of daytime activities in the community)		
9. Displacement / uprooting (problems with having to live away from home)		
10. Disrespect / humiliation (problems in feeling humiliated by the situation in which one lives or problems in feeling disrespected / humiliated by aid workers or community members)		

11. Drugs (problems because of drug use in the community)		
12. Education for children (problems with educational / learning opportunities for one's children)		
13. Emotional distress (problems in the community with people feeling upset, sad, worried, scared, angry, lonely, or otherwise distressed)		
14. Fair distribution of aid (problems in having fair access to humanitarian goods and services)		
15. Food / nutrition (problems in having enough nutritious and appropriate food)		
16. Freedom of movement and transport (problems in one's ability to move around between places)		
17. Health Care (problems in accessing health care, such as services, medications, and for women reproductive health services)		
18. Income / livelihood (problems in making a living, problems in the ability to purchase essential goods and services)		
19. Information (problems in having information about the emergency situation and emergency aid, and having information on how to access aid)		
20. Law and justice (problems due to an ineffective system for law and justice)		
21. Mental illness (psychiatric problems / problems with mental disorder in the community, as locally defined / perceived)		
22. Participation / decision-making (problems in having a say in the aid response)		
23. Personal hygiene (problems in being able to wash, bath and maintain personal hygiene, access to soap, and for women, sanitary materials)		
24. Physical health (problems because of physical illness, injury or physical disability)		
25. Religious / cultural / spiritual practices (problems in being able to carry out cultural / spiritual / religious practices)		

26. Security / safety (problems in being safe and protected in the community / camp)		
27. Separation from family members (problems with the ability to find, be with, or have information on missing relatives or beloved ones)		
28. Shelter / housing (problems with shelter)		
29. Social support (problems in getting either emotional support or practical help from family and community members)		
30. Toilets (problems with access to clean, safe and accessible toilets)		
31. Violence against women (problems because of physical or sexual violence against women in the community or at home)		
32. Water (problems in accessing water which is safe for drinking and cooking)		
A. Met needs – count the number of 1s in the column		
B. Unmet needs – count the number of 2s in the column		
C. Total number of needs – add together A + B		

Date:…….. Participant number:……..

Interviewer Name:…… Time assessment started:……..

APPENDIX A2

Humanitarian Emergency Settings Perceived Needs (HESPER) Scale – Draft for pilot-testing

Please record respondent's details:

Gender:…….. Age:…… Years of formal education:……..

Marriage status:…….. Number of children:……

Ethnicity (if relevant / appropriate to ask):…….

Length of time of displacement (if relevant):…….

Need rating: **0 = no serious problem 1 = serious problem (unmet need)** **9 = not known / not applicable**	**Need rating**	**Order of priority** for unmet needs
1. Drinking water In your opinion, do you have a serious problem because you are unable to access enough water that is safe for drinking and cooking?		
2. Food Do you have a serious problem because you do not have sufficient and acceptable food?		
3. Cooking Do you have a serious problem with cooking because of inadequate facilities and items, for example pots, plates, stove, firewood etc?		
4. Place to live in Do you have a serious problem because you do not have an adequate place to live in?		
5. Toilets Do you have a serious problem because you do not have access to clean toilets or are not able to get to them safely?		
6. Keeping clean In your opinion, do you have a serious problem because you are not able to: wash, bath, and keep clean enough, get enough soap or get enough sanitary materials (for women)?		

Date:…….. Participant number:……..

Interviewer Name:…… Time assessment started:……..

7. Clothing and bedding Do you have a serious problem because you do not have enough: clothing, shoes, or bedding and blankets?		
8. Physical health Do you have a serious problem because you have a physical illness or injury?		
9. Health care Do you have a serious problem because you are not able to: use health services, or get medications?		
10. Making a living In your opinion, do you have a serious problem because you are not able to make a living?		
11. Safety Do you have a serious problem because you do not feel safe?		
12. Education for your children Do you have a serious problem because you are not able to access school / education for your children?		
13. Safety and protection for your children Do you have a serious problem because your children are not safe and protected in the community?		
The next seven questions refer to your community, so please think about your community (for example village or camp) as a whole when answering the questions:		
14. Safety and protection from violence for women in your community Is there a serious problem in your community because of either physical or sexual violence against women, whether in the community or in their homes?		
15. Protection by the law in your community* Is there a serious problem in your community because of an ineffective system for law and justice?		
16. Burying and mourning the dead in your community Is there a serious problem in your community because: bodies of the dead are not dealt with appropriately or people are not able to carry out religious ceremonies for the dead?		
17. Alcohol use in your community Is there a serious problem in your community because many people drink a lot of alcohol?		

Date:…….. Participant number:……..

Interviewer Name:…… Time assessment started:……..

18. Drug use in your community Is there a serious problem in your community because many people use harmful drugs?		
19. Mental illness in your community Is there a serious problem in your community because many people have a mental illness?		
20. Care for people in your community who are on their own Is there a serious problem in your community because of inadequate care for: children who have been left on their own, widows or elderly who have been left on their own, or people with physical or mental problems who have been left on their own?		

The rest of the questions refer to yourself again:

21. Care for family members in your household Do you have a serious problem because in your current situation it is difficult to care for: young children living in your household, elderly family members living in your household, disabled family members living in your household or very sick family members living in your household?		
22. Separation from family members Do you have a serious problem because you are not able to find, be with, or have information on missing relatives or beloved ones?		
23. Support from others Do you have a serious problem because you are not getting enough emotional support or practical help from people in the community?		
24. Religious, cultural or spiritual practices Do you have a serious problem because you are not able to carry out: cultural practices or spiritual or religious practices?		
25. Distress Do you a serious problem because you feel extremely sad, worried, scared, angry, or upset?		
26. Living away from home Do you have a serious problem because you are forced to live away from home?		

Date:…….. Participant number:……..

Interviewer Name:…… Time assessment started:……..

27. Respect Do you have a serious problem because you feel humiliated or disrespected by either: the situation in which you live, aid workers or community members?		
28. Having a say in the aid response Do you have a serious problem because people in your community do not have enough say in the aid response, such as being asked for opinion and advice?		
29. Information about the situation Do you have a serious problem because you do not have: information about the emergency situation, information about emergency aid and how to get it, or information about your legal rights?		
30. Aid being handed out fairly Do you have a serious problem because you do not have fair access to the aid that is delivered?		
31. Moving around between places Do you have a serious problem because you are not able to move around between places, for example going to the next village or town?		
32. Having enough to do during the day Do you have a serious problem because you do not have enough to do during the day?		
Additional unmet needs:		
33. Do you have any other serious problems that I have not yet asked you about? *record response*:		
34. In addition, do you have any other serious problems that I have not yet asked you about? *record response*:		
35. Finally, do you have any other serious problems that that I have not yet asked you about? *record response*:		

Date:…….. Participant number:……..

Interviewer Name:…… Time assessment started:……..

Priority ratings for unmet needs:		
(*Read out all areas that are rated as 1, as well any additional unmet needs)* "Which one is the most serious problem?.....Which one is the second most serious problem?... And, which one is the third most serious problem?"		
Ratings:		
Unmet needs – count the number of 1s in the column		

Time assessment ended:

APPENDIX A3

Humanitarian Emergency Settings Perceived Needs (HESPER) Scale – Draft for field-testing

Date:…….. *Interviewer Name*:……..

Participant Number:…… *Location (name of city, village or camp):……*

Time assessment started:…….. *Gender*:…… *Age:……..*

Marriage status:…….. ……. *Number of children:……*

Years of formal education:……

Ethnicity (if relevant / appropriate to ask):……..

Religion (if relevant / appropriate to ask):……

Length of time of displacement (if relevant):……..

Rating: ***0 = no serious problem 1 = serious problem*** ***9 = do not know / not applicable / refuse to answer***	***Rating***
I am going to ask you about the serious problems that you may currently be experiencing. We are interested in finding out what you think; a serious problem is a problem that you consider serious. There are no right or wrong answers. I am first going to ask you about your own serious problems.	
1. Drinking water Do you have a serious problem because you do not have enough water that is safe for drinking or cooking?	
2. Food Do you have a serious problem with food; for example because you do not have enough, or good enough, food; or because you are not able to cook food?	
3. Place to live in Do you have a serious problem because you do not have an adequate place to live in?	
4. Toilets Do you have a serious problem because you do not have easy and safe access to a clean toilet?	

5. Keeping clean *For men:* Do you have a serious problem because in your situation it is difficult to keep clean; for example because you do not have enough soap, water or a suitable place to wash? *For women*: Do you have a serious problem because in your situation it is difficult to keep clean; for example because you do not have enough soap, sanitary materials, water or a suitable place to wash?	
6. Clothing, shoes, bedding or blankets Do you have a serious problem because you do not have enough, or good enough, clothing, shoes, bedding or blankets?	
7. Income or Livelihood Do you have a serious problem because you do not have enough income, money or resources to live?	
8. Physical health Do you have a serious problem with your physical health; for example because you have a physical illness, injury or disability?	
9. Health care *For men:* Do you have a serious problem because you are not able to get adequate health care for yourself; for example treatment or medicines? *For women:* Do you have a serious problem because you are not able to get adequate health care for yourself; for example treatment or medicines; or health care during pregnancy or childbirth?	
10. Distress Do you have a serious problem because you feel very distressed; for example very upset, sad, worried, scared, or angry?	
11. Safety Do you have a serious problem because you or your family are not safe or protected where you live now; for example because of conflict, violence or crime in your community, city or village?	
12. Education for your children Do you have a serious problem because your children are not in school or are not getting a good enough education?	
13. Care for family members Do you have a serious problem because in your situation it is difficult to care for family members who live with you; for example young children in your family; or family members who are elderly, disabled or ill?	
14. Support from others Do you have a serious problem because you are not getting enough support from people in your community; for example emotional support or practical help?	
15. Separation from family members Do you have a serious problem because you are separated from family members?	

16. Being displaced from home Do you have a serious problem because you have been displaced from your home country, city or village?	
17. Information Do you have a serious problem because you do not have enough information; for example information about the situation in which you live now; or the situation in your home country, city or village?	
18. Aid Do you have a serious problem because of inadequate aid; for example because you do not have information about the aid that is available; because you do not have fair access to the aid that is available; or because aid agencies are working on their own without involvement from people in your community?	
19. Respect Do you have a serious problem because you do not feel respected or you feel humiliated; for example because of the situation in which you live; or because of the way other people, including aid workers, treat you?	
20. Moving between places Do you have a serious problem because you are not able to move between places; for example going to another village or town?	
21. Too much free time Do you have a serious problem because you have too much free time in the day?	
The last few questions refer to people in your community[2], so please think about members of your community when answering these questions.	
22. Law and justice in your community Is there a serious problem in your community because of an inadequate system for law and justice; or because people do not know enough about their legal rights?	
23. Safety or protection from violence for women in your community Is there a serious problem for women in your community because of physical or sexual violence towards them; either in the community or in their homes?	
24. Alcohol or drug use in your community Is there a serious problem in your community because people drink a lot of alcohol; or use harmful drugs?	
25. Mental illness in your community Is there a serious problem in your community because people have a mental illness?	

[2] The term 'community' should be replaced with the term most suitable to the local geographical context (e.g. village, town, neighbourhood, camp etc) throughout the HESPER form.

26. Care for people in your community who are on their own Is there a serious problem in your community because there is not enough care for people who are on their own; for example unaccompanied children, widows or elderly people; or unaccompanied people who have a physical or mental illness, or disability?	

Additional serious problems:

Do you have any other serious problems that I have not yet asked you about?
Record responses:

1.

2.

3.

Priority ratings for serious problems:

Read out all areas that are rated as 1, as well as any additional serious problems listed above.

Record responses:

1. Out of these problems, which one is the most serious problem?

2. Which one is the second most serious problem?

3. And, which one is the third most serious problem?

Time assessment ended:

Appendices B –
Project materials for pre-testing of HESPER Scale

KING'S College LONDON Founded 1829
University of London

APPENDIX B1

Participant information sheet (pre-testing)

INFORMATION FOR PARTICIPANTS
Development of questions to assess the needs of people who are affected by conflict or other disasters.

We are inviting you to take part in a postgraduate study by King's College London[3] and the World Health Organisation (WHO)[4] in Geneva.

Please be aware that taking part in this study will give no direct benefits to you or your family. You should only take part if you want to. If you choose not to take part this is okay as it will not affect any help that you or your family are getting.

We would like you to know why we are doing this study and what we will ask you to do. Please think about the following information and talk about it with other people if you want. Ask us anytime if there is anything that is not clear or if you would like more information. You may keep this piece of paper if you want.

Aims

We are looking for a way to find out what people need when they are living in a place where there has been conflict or another disaster. This means that we want to find out what people who are living in these places see as *their* needs. These are problems that they want help with. We hope that by better understanding what people living in a place where there is conflict or another disaster see as their serious problems, more people will get the help they really want.

Why are we inviting you?

The Refugee Council has told us that you have lived in a camp away from your home at some point in your life. Because of this experience, we hope that you

[3] Maya Semrau, Institute of Psychiatry, King's College London, email: maya.semrau@iop.kcl.ac.uk
[4] Dr Mark van Ommeren, Department of Mental Health and Substance Abuse, WHO, email: vanommerenm@who.int

will be able to help us find out what serious problems people have when they are living in a place where there is conflict or another disaster.

What would we ask you to do?

If you decide to take part, the study would take about 60 minutes of your time. We would like to ask you to do three things:

1. We would like to ask you to answer questions about the problems *you* had when you lived in a camp away from home. We would like to ask you questions about many different possible problems.

2. We would like to ask you to answer questions about the problems which *people in general* may have when living in a place where there is conflict or another disaster. We would ask you about a number of possible problems. We would like you to tell us how important each of these is in your experience for people who are living in a place where there is conflict or another disaster. We would like you to tick each problem area as between 0 and 10. 0 means that the area is not at all important and 10 means that the area is very important. We would also like you to tell us if we have missed any important problem areas and whether you found our questions easy to understand.

3. At the end we would like to ask you whether you found it upsetting to talk about the problems. We would like to hear from you which problems you found difficult to talk about.

We hope that you will feel comfortable with the assessment. If you feel unhappy about it anytime, please tell us. You do not have to answer questions when you do not want to. Also, you can stop at any time. You just have to say 'stop' and we will stop and will not ask you any more questions. You do not even have to say why you want to stop.

What would happen to the information you give us?

Some of the questions are private. Please do not feel bad about answering those questions as nobody will know your answers. To make sure that nobody knows who you are, we will not put your name on the paper with the questions. Instead we will write a number on it.

We will keep all the information safe and secure at all times, but it will be looked at by members of the study team. We will not be able to tell who you are when

looking at your answers. Once you have given us your answers, we will use them and you will not be able to ask us not to.

Please contact us if anything is not clear or if you would like some more information. You can contact either Maya Semrau at King's College London or Mark van Ommeren at WHO in Geneva, who together facilitate this study. If the study has troubled or harmed you in any way you can also contact King's College London using the details below for further advice and information.

Thank you for your time.

Maya Semrau
email: maya.semrau@iop.kcl.ac.uk
tel: 020 7848 5084

Dr Mark van Ommeren
email: vanommerenm@who.int

Maya Semrau
King's College London
Institute of Psychiatry
Box P029
De Crespigny Park
London SE5 8AF

Do you have any questions?

Where participants choose to give their verbal consent (otherwise use written informed consent form):

Do you agree to be in this study? **Yes** **No**

I have explained the study to the participant.

_____ _____

Interviewer as Witness to Consent Procedures Date
(to be signed by interviewer after participant's verbal consent)

APPENDIX B2

Consent form (pre-testing)

CONSENT FORM FOR PARTICIPANTS IN RESEARCH STUDIES

Please fill in this form after you have read the Information Sheet and listened to an explanation about the study.

KING'S College LONDON
University of London

Title of Study: Development of questions to assess the needs of people who are affected by conflict or other disasters.

King's College Research Ethics Committee Ref: PNM/08/09-19

- Thank you for thinking about taking part in this study. The person organizing the study must explain the project to you before you agree to take part.
- If you have any questions about the study, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and look at any time.
- *I understand that if I decide at any other time during the study that I do not want to take part in this study, I can tell the researchers and can stop the study.*
- *I understand that I must not take part in the study if I am under 18 years of age.*
- *I agree that my personal information will be looked at for the reasons which were explained to me. I understand that this information will be used in a way which is in line with the Data Protection Act 1998.*

Participant's Statement:

I _____

agree that the study has been explained in a way that I feel comfortable with and I agree to take part in the study. I have read or have been read both the notes written above and the Information Sheet about the study, and understand what the research study is about.

Signed Date

Investigator's Statement:

I _____

confirm that I have carefully explained the nature, demands and any foreseeable risks (where applicable) of the proposed research to the volunteer.

Signed Date

APPENDIX B3

Participant survey (pre-testing)

PARTICIPANT QUESTIONNAIRE

This questionnaire asks you about the interview you have just had. We would like to know what you think of the interview and would like to ask you a few questions about it.

A. I will now read out a few statements and I would like you to tell me whether you *strongly agree* (1), *agree* (2), *neither agree nor disagree* (3), *disagree* (4), or *strongly disagree* (5) for each statement.

	Strongly agree	agree	Neither agree nor disagree	disagree	Strongly disagree
The language in the interview was easy to understand.	**1**	**2**	**3**	**4**	**5**
The interview covered most of my previous serious problems sufficiently.	**1**	**2**	**3**	**4**	**5**
It was difficult giving answers in the interview.	**1**	**2**	**3**	**4**	**5**
The interview is useful for assessing the problems of a person.	**1**	**2**	**3**	**4**	**5**
The interview was too long.	**1**	**2**	**3**	**4**	**5**
The interview was too short.	**1**	**2**	**3**	**4**	**5**
The interview went too fast.	**1**	**2**	**3**	**4**	**5**
I did not like being interviewed.	**1**	**2**	**3**	**4**	**5**

I will now ask you a few questions and I would like you to please tell me what you think. You can answer in whatever way you want.

B. Did you find the questions easy to understand? Was there anything you found difficult to understand? Please explain.

C. Were there any areas which you found upsetting to talk about, or did not like talking about? Which ones?

D. Is there anything else you would like us to know about the interview, for example your experience of the interview, any problems you had with it, or any suggestions for how it could be made better?

Thank you very much for your time.

APPENDIX B4
Letter to participants (pre-testing)

Maya Semrau
King's College London
Box P029
De Crespigny Park
London
SE5 8AF

Friday, 08th May 2009

Dear

Thank you very much for agreeing to take part in my research project and for me to visit you at your house on ……..Your contributions will be very important to the project.

You can find some more information about the project included. Please contact me on 07817069894 if you have any questions about the project or if you would like to change the date or time of my visit. I will also phone you again a few days beforehand to make sure that you are still happy for me to visit you at this time.

I am really looking forward to meeting you.

Best wishes,

Maya Semrau.

APPENDIX B5
Ethics approval letters (pre-testing)

Maya Semrau
Ground Floor Flat
118 Queens Park Road
Brighton BN2 0GG

Friday 20th February 2009

Dear Maya

PNM/08/09-19 Development of a Scale to Assess Perceived Needs in Emergency-Affected Populations - Stage 2

Thank you for submitting your request for a modification to the above project. The modification has implications for the amendments already requested and as such it would be helpful if you would address both letters (amendments letter and modifications letter) at the same time. The questions below supplement those already sent in the amendments letter:

1. As it now appears that you will be conducting interviews please indicate how you will provide more time for potential participants to consider whether to participate (see question 1.II of amendments letter).
2. Please clarify where the interviews will take place (and address any risks to the researcher if going to private locations).
3. The Chairman of the Committee agreed that every participants should be offered the choice between written consent and witnessed verbal consent.

Please note that you should use your reference number (given in the title of this letter before the study name) on the study Information Sheet and recruitment literature and in all future correspondence with us regarding this application.

I am sure that once we receive the amendments as requested we will be able to arrange for speedy approval. Please submit one copy of the revised sections of the application and a cover letter detailing the changes made to the PNM RESC using the contact details provided at the top of this letter.

Please note that research involving human participants must not commence until full ethical approval has been granted.

Yours sincerely

Maggie Newton
Senior Administrator (Research Ethics)

Cc: Professor Graham Thornicroft.

Maya Semrau
Ground Floor Flat
118 Queens Park Road
Brighton BN2 0GG

Friday 20th February 2009

Dear Maya

PNM/08/09-19 Development of a Scale to Assess Perceived Needs in Emergency-Affected Populations - Stage 2

Thank you for submitting your amendments to the above application. I am writing to advise you that there are some points which we would like to resolve before approval is granted:

1. You state that you are using a questionnaire which participants will complete but at other points in the application it seems that you plan to be present while the participant completes it or that you will be administering the questionnaire. It is assumed that this is a self-completion questionnaire and, as such, participants will be able to consider whether they wish to participate and then send the questionnaire to you at a later date. Please confirm that this is the case and amend your recruitment documents accordingly. If this is not the case please note the following:
    I. If you are administering the questionnaire yourself this is an interview and a consent form would be needed.
    II. You will need to re-consider your recruitment procedure as participants must be given adequate time to decide whether to participate and as such the Information Sheet should be provided prior to you conducting the interview.
2. We assume that participants who are recruited through other agencies will also be able to access the support you detail as being provided through the Refugee Council.
3. In your response letter you indicate that you do intend to use a code to link participants with their responses but do not provide a justification for why this is necessary. Why can't participants return questionnaires anonymously?

Please note that you should use your reference number (given in the title of this letter before the study name) on the study Information Sheet and recruitment literature and in all future correspondence with us regarding this application.

I am sure that once we receive the amendments as requested we will be able to arrange for speedy approval. Please submit one copy of the revised sections of the application and a cover letter detailing the changes made to the PNM RESC using the contact details provided at the top of this letter.

Please note that research involving human participants must not commence until full ethical approval has been granted.

Yours sincerely

Maggie Newton
Senior Administrator (Research Ethics)

Cc: Professor Graham Thornicroft.

Maya Semrau
Ground Floor Flat
118 Queens Park Road
Brighton BN2 0GG

Friday 27th February 2009

Dear Maya

PNM/08/09-19 Development of a Scale to Assess Perceived Needs in Emergency-Affected Populations - Stage 2

Thank you for submitting the response to the amendment and modification queries. I am pleased to inform you that these meet the requirements of the PNM RESC and therefore that full approval is now granted on the following provisos:

1. You mention a pre-assigned code for participant's responses, but this study is anonymous. It is assumed that the code will be merely a means of assessing response rates. For example, 1, 2, 3, etc. If not please contact this office as this will affect your approval.

2. That you alter the consent form as the wording could not be used for those who wish to have signed witnessed consent. Given this you would need two forms; one for each type of consent.

Please ensure that you follow all relevant guidance as laid out in the King's College London *Guidelines on Good Practice in Academic Research* (http://www.kcl.ac.uk/college/policyzone/attachments/good_practice_May_08_FINAL.pdf).

For your information ethical approval is granted until **27th February 2011**. If you need approval beyond this point you will need to apply for an extension to approval at least two weeks prior to this explaining why the extension is needed, (please note however that a full re-application will not be necessary unless
the protocol has changed). You should also note that if your approval is for one year, you will not be sent a reminder when it is due to lapse.

If you do not start the project within three months of this letter please contact the Research Ethics Office. Should you need to modify the project or request an extension to approval you will need approval for this and should follow the guidance relating to modifying approved applications: http://www.kcl.ac.uk/research/ethics/applicants/modifications.html

Any unforeseen ethical problems arising during the course of the project should be reported to the approving committee/panel. In the event of an untoward event or an adverse reaction a full report must be made to the Chairman of the approving committee/review panel within one week of the incident.

Please would you also note that we may, for the purposes of audit, contact you from time to time to ascertain the status of your research.

If you have any query about any aspect of this ethical approval, please contact your panel/committee administrator in the first instance (http://www.kcl.ac.uk/research/ethics/contacts.html). We wish you every success with this work.

We wish you every success with this work. Yours sincerely

Rowena Lamb

Senior Research Ethics Officer (Health)

Cc: Professor Graham Thornicroft.

Appendices C –
Project materials for pilot-testing of HESPER Scale

APPENDIX C1
Participant information sheet (pilot-testing)

INFORMATION FOR PARTICIPANTS
Development of questions to assess the needs of people who are affected by conflict or other disasters.

We are inviting you to take part in a study by King's College London and the World Health Organisation (WHO). We are conducting a study to find out about the serious problems that people have when they have experienced a conflict or another disaster. We hope that by better understanding what people, like you, see as their serious problems, more people will get the help they really want.

I would like to assure you that participation in this study is voluntary. If you decide to take part, the interview would take about 30 to 60 minutes of your time.

1. We would ask you questions about the problems you may currently be experiencing.
2. We would ask you a few questions about your experience of the interview.
3. In addition, we would invite you to take part in a group discussion with other people of your community, to tell us what you think about the questions we asked you during the interview. Even if you choose to take part in the interview, you can decide not to take part in this group discussion.

You have the right to refuse to answer any question I ask you unless you want to. Please just let me know and I will move to the next question. You may also terminate the interview at any time if you wish and without having to give a reason. I assure you that all the information we receive will be completely confidential and anonymous, so it will not be possible to link any of the information we collect to you.

If you have any questions now or in the future you can contact (*insert local organisation's address and telephone number*) for further advice and information.

Thank you for your time.

Do you have any questions?

Do you agree to be in this study / assessment? **Yes** **No**

I have explained the study / assessment to the participant.

_____ _____

Interviewer as Witness to Consent Procedures Date
(to be signed by interviewer after participant's verbal consent)

APPENDIX C2
Participant survey (pilot-testing)

PARTICIPANT QUESTIONNAIRE

This questionnaire asks you about the interview you have just had. I would like to know what you think of the interview and would like to ask you a few questions about it.

The language in the interview was easy to understand.	**Yes**	**No**
The interview covered most of your serious problems sufficiently.	**Yes**	**No**
It was difficult giving answers in the interview.	**Yes**	**No**
The interview is useful for assessing the problems of a person.	**Yes**	**No**
The interview is too long.	**Yes**	**No**
The interview is too short.	**Yes**	**No**
The interview went too fast.	**Yes**	**No**
I did not like being interviewed.	**Yes**	**No**
At times I did not feel comfortable during the interview.	**Yes**	**No**
Some of the questions were too personal.	**Yes**	**No**

A. In your opinion, what would be the ideal length for this interview?

B. Did you find the questions easy to understand? Was there anything you found difficult to understand?

C. Is there anything else you would like us to know about the interview, for example anything about your experience of doing the interview, any problems you had with the interview, or any suggestions for improvement?

Thank you very much for your time.

APPENDIX C3
Interviewer survey (pilot-testing)

INTERVIEWER QUESTIONNAIRE

We would like to know what you think about the training manual and about your experiences of using the HESPER.

The language in the training manual was easy to understand.	**Yes**	**No**
The training manual is too long.	**Yes**	**No**
The training manual is too short.	**Yes**	**No**
The guidelines and instructions in the training manual on how to use the HESPER were difficult to understand.	**Yes**	**No**
The training manual was helpful in understanding how to use the HESPER.	**Yes**	**No**
The rating instructions for the HESPER were difficult to understand, even after reading the training manual.	**Yes**	**No**
The language used in the HESPER was difficult to understand.	**Yes**	**No**
I understood what the HESPER was assessing.	**Yes**	**No**
It was difficult to rate people using the HESPER.	**Yes**	**No**
I feel confident using the HESPER.	**Yes**	**No**
The HESPER is useful for assessing the needs of a person.	**Yes**	**No**
The HESPER is too long.	**Yes**	**No**
The HESPER is too short.	**Yes**	**No**

1. In your opinion, what would be the ideal length for a HESPER interview?

2. Is there any section in the training manual which you found either very good or very bad? Please explain your reasons.

3. Is there any of the HESPER Scale's problem areas, for which you found it particularly difficult to make ratings overall? If so, why?

4. Is there anything else you would like us to know about either the usefulness and intelligibility of the training manual, your experience of doing the HESPER assessments, any problems you might have had, or any suggestions for improvement in the training manual or HESPER? Please write this down in the space below.

Thank you very much for your time.

APPENDIX C4
Focus group discussion guide (pilot-testing)

FOCUS GROUP INSTRUCTIONS

A. <u>Discussion of HESPER problem areas:</u>

Author's note: This is an example page. The same four questions outlined below were discussed for each of the 32 HESPER Scale's items (see Appendix A2 for HESPER items).

1. Drinking water

In your opinion, do you have a serious problem because you are unable to access enough water that is safe for drinking and cooking?

How understandable is this question in your language? Please comment on any difficulties.

How relevant to your life and to the life of people in your community is this question? Please explain.

Would people in your community feel comfortable answering this question? If not, please explain.

Are there any reasons why some people in your community would have difficulties answering this question honestly? Please explain.

B. <u>Discussion of missing problem areas:</u>

In your opinion, are there any important areas missing, i.e. do you feel that people in your community have serious problems in any areas which we did not mention?

APPENDIX C5
Expert survey (pilot-testing)

Subject of email: Seeking your feedback on HESPER Project (5 minutes of your time)

Dear ….,

As member of the HESPER Project's International Advisory Group, we would like to ask you for your advice.

As you may recall, you were asked for your feedback on the draft HESPER Scale (and other project materials) earlier this year. Thank you again for your valuable comments. Based on your feedback we have since revised the draft scale and have pilot-tested it in the UK with refugees from the DRC, in Amman (Jordan) with displaced Iraqis (through WHO Jordan), and in Gaza (through Fafo). We also hope to pilot-test the scale in South Sudan soon (through Humanitarian Accountability Partnership).

In 2010 we hope to move from small-scale pilot-testing to larger-scale field-testing in further humanitarian settings, to determine the instrument's psychometric properties (i.e. reliability and validity statistics) in the field. For this we are currently looking for suitable sites for testing.

Thus far, pilot-testing has shown that the HESPER Scale is considered relevant, intelligible and useful across settings. However, one issue which still remains is the instrument's ideal administered length.

We would therefore like to invite you to take part in a very brief survey, which you can find below. This should take no more than five minutes of your time.

To aid you with the survey, please find the current draft HESPER Scale attached.

1. In your opinion, how many minutes should it take on average to administer the HESPER Scale to one respondent?

2. How many domains (problem areas) do you think the HESPER Scale should have (i.e. number of domains)?

3. What length do you consider too long, i.e. at what point would the length of the scale stop you from using it in the field (in minutes)?

4. Is there a length that you consider too short (number of domains)?

5. If you could choose between a humanitarian needs assessment scale which is around 15 minutes in length (which covers only a limited number of aspects of the person), and one which is around 30 minutes in length (but is much more comprehensive), which one would you be more likely to choose?

We would very much appreciate it if you could please respond by Friday, 06th November 2009.

Please do not hesitate to contact us should you have any further questions.

Thank you very much for your continued help.

Best wishes, Maya Semrau (King's College London) and Mark van Ommeren (WHO MSD Geneva).

APPENDIX C6

Ethics approval letters (pilot-testing)

Maya Semrau
Ground Floor Flat
118 Queen's Park Road
BN2 0GG

28th January 2009

Dear Maya

PNM/08/09-41 Development of a Scale to Assess Perceived Needs in Emergency-Affected Populations - Stage 3

Thank you for submitting the above application which the PNM RESC considered at our meeting on **20th January 2009**. I am writing to advise you that there are some points which we would like to resolve before approval is granted.

The Committee raised concerns that it was as yet unknown as to where this study would take place and the type of events and circumstances the workers would be in whilst operating in their role as a researcher for King's College London. Given this, the Committee wishes to bring to your attention the following guidance in the PNM RESC Guidelines (Section 17) on disclosure:
"Occasionally research brings to light information about a participant which could affect the welfare of others or the participant. For instance an interviewee might reveal professional misconduct or a risk to public health while results from a diagnostic imaging scan could reveal information which should be made known to the participant's GP. In these cases the need for a researcher to disclose information to an appropriate authority might override concerns about confidentiality. The College Legal Compliance team can offer advice and assistance here (http://www.kcl.ac.uk/iss/legalc/compliance/). ….Information about the likely abuse of children should always be disclosed irrespective of any assurances of confidence."

With research being undertaken overseas, the PNM RESC would expect that standards applied within the UK would be applied as far is as possible in the country where the research is being done. For this study, the Committee expects the above guidelines to be adhered to. If the procedures for disclosure laid down by the charity organisation you intend to use conflict with the above, you must inform the Committee of this.

In addition, as per the PNM RESC Guidelines and Terms of Approval, all records relating to

adverse reactions and untoward events must be kept and any unforeseen ethical problems arising during the course of the project should be reported to the approving committee/panel. In the event of an untoward event or an adverse reaction a full report must be made to the Chairman of the approving committee/review panel within one week of the incident. This should include a description of the event itself and how this was dealt with.

On this basis the Committee will grant approval when the point below have been complied with. However, once the study has begun, you must inform the Committee in writing of where the study is being conducted and in what type of situation the charity workers will be in.

In addition, the following needs to be addressed:

1. You state that local aid workers will conduct the interviews – who will administer the survey to local aid workers and who will lead the focus groups?
2. We assume that data will be kept by local aid workers until it is sent on to the researcher. Given this, how realistic are security arrangements going to be in an emergency affected area and what can be done to minimise potential problems?
3. Please clarify whether feedback concerning the intelligibility of the training manual will be sought before local aid workers administer the questionnaires and whether any additional training could be given if significant problems with the manual are identified.
4. The Committee agreed that written consent should be obtained whenever possible and the form should be left with the researcher. The Committee recommends that in settings where there are potential risks to the participant in participating, there should be a system where personal identification is not necessary (for example codes or questions) should be implemented.
5. You state that you will be taking participants' names (Section 17) – does this not conflict with some of your reasons for not requiring written consent? We understand that you need the names in order to match a person's first response with the second, but should names be retained after this point? If the reasons for not recording identities are outweighed by the need to keep a record of names, should written consent be sought from those who are able to read and write (particularly as personal data is being requested)?
6. Please consider the issue of withdrawal from participation in relation to whether a participant can withdraw his or her data following participation. In particular consider whether this will be practical (given the context) and possible (if records of identities are to be destroyed after a certain period). Please make the arrangements for withdrawal of participation and data clear in the Information Sheet.
7. Please clarify how participants would contact the local organiser/ research team if they needed to.

8. Please describe the mechanisms you will have in place to ensure the safety of the researchers and address the possibility of both physical and psychological risks to the researcher.
9. Please describe how you will deal with potential disclosures regarding on-going risk or harm to participants.
10. Please state on the participant Information Sheet that participants can choose to think about whether to participate and let the researcher know later (and if so whether the researcher will return at a later date or will need to be contacted).
11. Please provide further information about the survey for local aid workers and the focus groups (in terms of topics to be discussed and practical arrangements).
12. Please ensure future applications are printed on double-sided photocopies.
13. Please ensure that evidence of ethical approval in host countries (where required) is sent to the Research Ethics Office when obtained to be added to your application file.
14. Please clarify whether the College has a duty of care to local aid workers while they are conducting the research and, if so, that suitable arrangements have been made (e.g. risk assessment, insurance etc). If this is not the case please confirm that this will be made clear during negotiations with collaborating employing local aid workers.

Please note that you should use your reference number (given in the title of this letter before the study name) on the study Information Sheet and recruitment literature and in all future correspondence with us regarding this application.

I am sure that once we receive the amendments as requested we will be able to arrange for speedy approval. Please submit one copy of the revised sections of the application and a cover letter detailing the changes made to the PNM RESC using the contact details provided at the top of this letter.

Please note that research involving human participants must not commence until full ethical approval has been granted.

With best wishes

Yours sincerely

Riina Heinonen – Research Ethics Officer (Health)
For and on behalf of
Dr Patricia Conrod, Chairman
Psychiatry Nursing & Midwifery Research Ethics Subcommittee
c.c. Professor Graham Thrornicroft

Maya Semrau
Ground Floor Flat
118 Queen's Park Road
BN2 0GG

Monday 2nd March 2009

Dear Maya

PNM/08/09-41 Development of a Scale to Assess Perceived Needs in Emergency-Affected Populations - Stage 3

Thank you for sending in the amendments requested to the above project. I am pleased to inform you that these meet the requirements of the PNM RESC and therefore that full approval is now granted subject to the following conditions:

1. We assume that data will be transferred to King's College London as soon as possible and no data will be left with local organisations.
2. We would recommend that you make it clear to participants on the Information Sheet that the reason they cannot withdraw data is because it won't be practical and provide a further reassurance concerning confidentiality.
3. We assume that before going to each location a departmental risk assessment will be carried out.
4. We would advise you to check with the local organisation that separate male/female focus groups are appropriate for the context.

Please ensure that you follow all relevant guidance as laid out in the King's College London *Guidelines on Good Practice in Academic Research* (http://www.kcl.ac.uk/college/policyzone/attachments/good_practice_May_08_FINAL.pdf).

For your information ethical approval is granted until **2nd March 2012**. If you need approval beyond this point you will need to apply for an extension to approval at least two weeks prior to this explaining why the extension is needed, (please note however that a full re-application will not be necessary unless the protocol has changed). You should also note that if your approval is for one year, you will not be sent a reminder when it is due to lapse.

If you do not start the project within three months of this letter please contact the Research Ethics Office. Should you need to modify the project or request an extension to approval you will need approval for this and should follow the guidance relating to modifying approved applications: http://www.kcl.ac.uk/research/ethics/applicants/modifications.html

Any unforeseen ethical problems arising during the course of the project should be reported to the approving committee/panel. In the event of an untoward event or an adverse reaction a full report must be made to the Chairman of the approving committee/review panel within one week of the incident.

Please would you also note that we may, for the purposes of audit, contact you from time to time to ascertain the status of your research.

If you have any query about any aspect of this ethical approval, please contact your panel/committee administrator in the first instance (http://www.kcl.ac.uk/research/ethics/contacts.html).

We wish you every success with this work.

With best wishes

Yours sincerely

Maggie Newton
Senior Administrator (Research Ethics)

c.c. Professor Graham Thornicroft

Maya Semrau
Ground Floor Flat
118 Queen's Park Road
BN2 0GG

Wednesday 22nd April 2009

Dear Maya

PNM/08/09-41 Development of a Scale to Assess Perceived Needs in Emergency-Affected Populations - Stage 3

I write in response to your request to make six modifications to the above project. I am pleased to inform you that these have been approved subject to the following conditions:

1. That you provide us with more details regarding the situation in Amman.
2. That you inform the Committee in writing of where the study will also be conducted and in what type of situation the charity workers will be in.
3. That the translated documents are a direct translation of those approved by the PNM RESC.

With best wishes

Yours sincerely

Rowena Lamb
Senior Research Ethics Officer (Health)

c.c. Professor Graham Thornicroft

Maya Semrau
Ground Floor Flat
118 Queen's Park Road
BN2 0GG

02 June 2009

Dear Maya

PNM/08/09-41 Development of a Scale to Assess Perceived Needs in Emergency-Affected Populations - Stage 3

I write in response to your request to amend the information sheet and consent process in response to advice received from a colleague in Jordan. I am please to inform you that a sub-group of the PNM RESC considered your request and that the modification has been approved.

With best wishes

Yours sincerely

Rowena Lamb
Research Ethics Administrator

c.c. Professor Graham Thornicroft

Maya Semrau
Flat 4 10 BN1 1UB
Marlborough Place
Brighton
BN1 1UB

17 August 2009

Dear Maya Semrau

PNM/08/09-41 Development of a Scale to Assess Perceived Needs in Emergency-Affected Populations - Stage 3

I am writing with reference to your recent modification request, in which you added South Sudan as a research location. I am pleased to confirm that this has been approved by the Psychiatry, Nursing and Midwifery Research Ethics Subcommittee.

The committee noted that you have submitted a departmental risk assessment form. Their informal advice is that as well as completing that process, you should also check whether your travel can be covered by the College's insurers.

Good luck with your research.

Yours sincerely

Helen English

Senior Research Ethics Officer

On behalf of the PNM RESC

Maya Semrau
Flat 4 10 BN1 1UB
Marlborough Place
Brighton
BN1 1UB

28th September 2009

Dear Maya

PNM/08/09-41 Development of a Scale to Assess Perceived Needs in Emergency-Affected Populations - Stage 3

I am writing with reference to your recent modification request, in which you added Gaza as a research location. It was noted that no researcher of King's College London will travel to Gaza but the research is carried out by field staff of Fafo, a collaborating organisation. I am pleased to confirm that this has been approved by the Psychiatry, Nursing and Midwifery Research Ethics Subcommittee.

We wish you every success with this work.

Yours sincerely

Riina Heinonen
Senior Research Ethics Officer
On behalf of the PNM RESC

Maya Semrau
Flat 4 10 BN1 1UB
Marlborough Place
Brighton
BN1 1UB

20 November 2009

Dear Maya

PNM/08/09-41 Development of a Scale to Assess Perceived Needs in Emergency-Affected Populations - Stage 3

I am writing with reference to your recent modification request to change the small focus groups to individual interviews. First, thank you for forwarding on the recent risk assessment form and also for confirming that the safety arrangements approved by the PNM RESC remain in place.

I note that you are still in discussions with the Finance Department and I am pleased to inform you that your modification request has been approved on the proviso that the appropriate insurance is in place before you begin this part of the research.

Good luck with your research.

Yours sincerely

Rowena Lamb

Research Ethics Administrator

Appendices D –
Project materials for field-testing of HESPER Scale

APPENDIX D1
Participant information sheet (field-testing)

PARTICIPANT INFORMATION SHEET

Development of questions to assess the needs of people who are affected by conflict or other disasters.

We are inviting you to take part in a study by King's College London and *insert participating agency.* We are conducting a study to find out about the serious problems that people have when they have experienced a conflict or another disaster. We hope that by better understanding what people, like you, see as their serious problems, more people will get the help they really want.

I would like to assure you that participation in this study is voluntary. If you decide to take part, we would invite you to meet with the interviewer on either one or two occasions. The first interview would take about 1 to 1 ½ hours of your time and we would:

1. Ask you questions about the serious problems you may currently be experiencing.
2. Ask you questions about how satisfied and happy you are with many different areas of your life.
3. Ask you about any past traumatic events you may have experienced.

You will also be invited for a second interview. Even if you take part in the first interview, you can choose not to take part in the second interview. The second interview would take place next week and would take around 15 to 30 minutes of your time. During this interview we would ask you again about the serious problems you may be experiencing. This is to check that we have recorded your views during the first interview reliably.

You can either start the study now, or you can let us know within the next few days whether you would like to take part. If you decide to take part, you have the right to refuse to answer any question I ask you. Please just let me know and I will move to the next question. You may also stop the interview at any time if you wish and without having to give a reason. I assure you that all the information we receive will

be completely confidential, so it will not be possible for anybody outside our team to link any of the information we collect to you.

If you have any questions now or in the future you can contact (*insert local organisation's address and telephone number*) for further advice and information.

Thank you for your time.

Do you have any questions?

In settings where verbal consent is taken:
Do you agree to be in this study / assessment? **Yes** **No**

I have explained the study / assessment to the participant.

_____ _____
Interviewer as Witness to Consent Procedures Date
(to be signed by interviewer after participant's verbal consent)

APPENDIX D2

Consent form (field-testing)

CONSENT FORM FOR PARTICIPANTS IN RESEARCH STUDIES

Please fill in this form after you have read the Information Sheet and listened to an explanation about the study.

Title of Study: Development of questions to assess the needs of people who are affected by conflict or other disasters.

KING'S College LONDON
University of London

King's College Research Ethics Committee Ref: PNM/08/09-137

Thank you for thinking about taking part in this study. The person organizing the study must explain the project to you before you agree to take part. If you have any questions about the study, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and look at any time.

I understand that if I decide at any other time during the study that I do not want to take part in this study, I can tell the researcher and can stop the study. I am over 18 years of age. I agree that my personal information will be looked at for the reasons which were explained to me.

Participant's Statement:

I _____

agree that the study has been explained in a way that I feel comfortable with and I agree to take part in the study. I have read or have been read both the notes written above and the Information Sheet about the study, and understand what the research study is about.

Signed:..... Date:.....

Investigator's Statement:

I _____

confirm that I have carefully explained the nature, demands and any foreseeable risks (where applicable) of the proposed research to the volunteer.

Signed:..... Date:.....

APPENDIX D3
Revised WHOQOL-100 for field-testing

26 SELECTED QUESTIONS OF THE WHOQOL-100[5]

Instructions
This questionnaire asks how you feel about your quality of life, health, and other areas of your life.

I will read out each question to you, along with the response options. Please choose the answer that appears most appropriate. If you are unsure about which response to give to a question, the first response you think of is often the best one.

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life in the last two weeks.

[5] WHO (1995), The WHOQOL-Group, Division of Mental Health, WHO, Geneva

The following questions ask about how much you have experienced certain things in the last two weeks, for example, positive feelings such as happiness or contentment.

F4.1 How much do you enjoy life?

Not at all 1	A little 2	A moderate amount 3	Very much 4	An extreme amount 5

F13.1 How alone do you feel in your life?

Not at all 1	Slightly 2	Moderately 3	Very 4	Extremely 5

F16.1 How safe do you feel in your daily life?

Not at all 1	Slightly 2	Moderately 3	Very 4	Extremely 5

F16.2 Do you feel you are living in a safe and secure environment?

Not at all 1	Slightly 2	Moderately 3	Very 4	Extremely 5

F17.4 How much do you like it where you live?

Not at all 1	A little 2	A moderate amount 3	Very much 4	An extreme amount 5

F21.3 How much do you enjoy your free time?

Not at all 1	A little 2	A moderate amount 3	Very much 4	An extreme amount 5

The following questions ask about how completely you experience or were able to do certain things in the last two weeks.

F14.1 Do you get the kind of support from others that you need?

Not at all	A little	Moderately	Mostly	Completely
1	2	3	4	5

F14.2 To what extent can you count on your friends when you need them?

Not at all	A little	Moderately	Mostly	Completely
1	2	3	4	5

F18.1 Have you enough money to meet your needs?

Not at all	A little	Moderately	Mostly	Completely
1	2	3	4	5

F20.1 How available to you is the information that you need in your day-to-day life?

Not at all	A little	Moderately	Mostly	Completely
1	2	3	4	5

F20.2 To what extent do you have opportunities for acquiring the information that you feel you need?

Not at all	A little	Moderately	Mostly	Completely
1	2	3	4	5

F21.1 To what extent do you have the opportunity for leisure activities?

Not at all	A little	Moderately	Mostly	Completely
1	2	3	4	5

The following questions ask you to say how satisfied, happy or good you have felt about various aspects of your life over the last two weeks ; for example, about your family life or the energy that you have.

G4 How satisfied are you with your health?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

F13.3 How satisfied are you with your personal relationships?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

F14.3 How satisfied are you with the support you get from your family?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

F14.4 How satisfied are you with the support you get from your friends?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

F13.4 How satisfied are you with your ability to provide for or support others?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

F17.3 How satisfied are you with the conditions of your living place?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

F19.3 How satisfied are you with your access to health services?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

F19.4 How satisfied are you with the social care services?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

F21.4 How satisfied are you with the way you spend your spare time?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

F23.3 How satisfied are you with your transport?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

F12.4 How satisfied are you with your capacity for work?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
1	2	3	4	5

G1 How would you rate your quality of life?

Very poor	Poor	Neither poor nor good	Good	Very good
1	2	3	4	5

F9.1 How well are you able to get around?

Very poor	Poor	Neither poor nor good	Good	Very good
1	2	3	4	5

F8.1 How often do you have negative feelings, such as blue mood, despair, anxiety, depression?

Never	Seldom	Quite often	Very often	Always
1	2	3	4	5

APPENDIX D4

Revised traumatic events list of the CIDI for field-testing

CIDI TRAUMATIC EVENTS LIST

	YES (1)	NO (0)	Do not know / refused (9)
*PT1. In the next part of the interview, we ask about very stressful events that might have happened in your life. First, did you ever participate in <u>combat</u>, either as a member of a military, or as a member of an organized <u>non</u>-military group?	1	0	9
*PT2. Did you ever serve as a peacekeeper or relief worker in a war zone or in a place where there was ongoing terror of people because of political, ethnic, religious or other conflicts?	1	0	9
*PT3. Were you ever an unarmed civilian in a place where there was a war, revolution, military coup or invasion?	1	0	9
*PT4. Did you ever live as a civilian in a place where there was ongoing terror of civilians for political, ethnic, religious or other reasons?	1	0	9
*PT5. Were you ever a refugee – that is, did you ever flee from your home to a foreign country or place to escape danger or persecution?	1	0	9
*PT6. Were you ever kidnapped or held captive?	1	0	9
*PT7. Were you ever exposed to a toxic chemical or substance that could cause you serious harm?	1	0	9

	YES (1)	NO (0)	Do not know / refused
*PT8. Were you ever involved in a life-threatening automobile accident?	1	0	9
*PT9. Did you ever have any other life- threatening accident, including on your job?	1	0	9
*PT10. Were you ever involved in a major natural disaster, like a devastating flood, hurricane, or earthquake?	1	0	9
*PT11. Were you ever in a man-made disaster, like a fire started by a cigarette, or a bomb explosion?	1	0	9
*PT12. Did you ever have a life-threatening illness?	1	0	9
*PT13. As a child, were you ever badly beaten up by your parents or the people who raised you?	1	0	9
*PT14. Were you ever badly beaten up by a spouse or romantic partner?	1	0	9
*PT15. Were you ever badly beaten up by anyone else?	1	0	9
*PT16. Were you ever mugged, held up, or threatened with a weapon?	1	0	9

	YES (1)	NO (0)	Do not know / refused (9)
*PT17. The next two questions are about sexual assault. The first is about rape. We define this as someone either having sexual intercourse with you or penetrating your body with a finger or object when you did not want them to, either by threatening you or by using force, or when you were so young that you did not know what was happening. Did this ever happen to you?	1	0	9
*PT18. Other than rape, were you ever sexually assaulted or molested?	1	0	9
*PT19. Has someone ever stalked you – that is, followed you or kept track of your activities in a way that made you feel you were in serious danger?	1	0	9
*PT20. Did someone very close to you ever die unexpectedly; for example, they were killed in an accident, murdered, committed suicide, or had a fatal heart attack at a young age?	1	0	9
*PT21. Did you ever have a son or daughter who had a life-threatening illness or injury?	1	0	9
*PT22.1. When you were a child, did you ever witness serious physical fights at home, like when your father beat up your mother?	1	0	9
*PT22. Did anyone very close to you ever have an extremely traumatic experience, like being kidnapped, tortured or raped?	1	0	9
*PT23. Did you ever see someone being badly injured or killed, or unexpectedly see a dead body?	1	0	9
*PT24. Did you ever <u>do</u> something that <u>accidentally</u> led to the serious injury or death of another person?	1	0	9

	YES (1)	NO (0)	Do not know / refused (9)
*PT25. Did you ever on purpose either seriously injure, torture, or kill another person?	1	0	9
*PT26. Did you ever see atrocities or carnage such as mutilated bodies or mass killings?	1	0	9
*PT26.1. INSERT ADDITIONAL EVENT #1 HERE (OPTIONAL)	1	0	9
*PT26.2. INSERT ADDITIONAL EVENT #2 HERE (OPTIONAL)	1	0	9
*PT26.3. INSERT ADDITIONAL EVENT #3 HERE (OPTIONAL)	1	0	9
*PT26.4. INSERT ADDITIONAL EVENT #4 HERE (OPTIONAL)	1	0	9
*PT26.5. INSERT ADDITIONAL EVENT #5 HERE (OPTIONAL)	1	0	9
*PT27. Did you ever experience any other extremely traumatic or life- threatening event that I haven't asked about yet? Please briefly record this event or events: _____ _____ _____	1	0	9
*PT28. Sometimes people have experiences they don't want to talk about in interviews. I won't ask you to describe anything like this, but, without telling me what it was, did you ever have a traumatic event that you didn't report because you didn't want to talk about it?	1	0	9

APPENDIX D5
Ethics approval letters from King's College London (field-testing)

Maya Semrau
Ground Floor Flat
118 Queens Park Road
Brighton BN2 0GG

24th July 2009

Dear Maya

PNM/08/09-137 Development of a scale to assess perceived needs in emergency-affected populations – stage 4

Thank you for submitting the above application which the PNM RESC considered at our meeting on 21st July 2009.

As with previous phases of this study, the Committee raised concerns that it was as yet unknown as to where this study would take place and the type of events and circumstances the workers would be in whilst **operating in their role as researchers for King's College London.** Given this, the Committee wishes to again bring to the attention of you and your colleagues the following guidance in the PNM RESC Guidelines (Section 17) on disclosure:

"Occasionally research brings to light information about a participant which could affect the welfare of others or the participant. For instance an interviewee might reveal professional misconduct or a risk to public health while results from a diagnostic imaging scan could reveal information which should be made known to the participant's GP. In these cases the need for a researcher to disclose information to an appropriate authority might override concerns about confidentiality. The College Legal Compliance team can offer advice and assistance here (http://www.kcl.ac.uk/iss/legalc/compliance/). ….Information about the likely abuse of children should always be disclosed irrespective of any assurances of confidence."

With research being undertaken overseas, the PNM RESC would expect that standards applied within the UK would be applied as far is as possible in the country where the research is being done. For this study, the Committee expects the above guidelines to be adhered to. If the procedures for disclosure laid down by the charity organisation you intend to use conflict with the above, you must inform the Committee of this.

In addition, as per the PNM RESC Guidelines and Terms of Approval, all records relating to adverse reactions and untoward events must be kept and any unforeseen ethical problems arising during the course of the project should be reported to the approving committee/panel. In the event of an untoward event or an adverse reaction a full report must be made to the Chairman of the approving committee/review panel within one week of the incident. This should include a description of the event itself and how this was dealt with.

In addition the following points which we need to be clarified before approval is granted:

1. Please inform the Research Ethics Office as soon as you know where the research is carried out.
2. Please clarify how the local aid workers approaching participants will be recruited, supervised and their work coordinated when the PI is not on site.
3. Please also clarify where the responsibilities of the College lie with regards to the external research workers.
4. Please clarify how participants are identified/selected from sites by the PI or local aid workers.
5. Please describe how you will deal with potential disclosures regarding on-going risk or harm to participants.
6. Please contact the Legal Compliance team (legal-compliance@kcl.ac.uk) that check that your proposed plans for data management, storage and transfer of data complies with the College guidelines. (section 17)
7. It is assumed that the consent form should read “I am over 18 years of age” not under.
8. Please amend the information sheet as follows:
    a. Clarify that participants have the option to take part later on if they wish.

Please note that you should use your reference number (given in the title of this letter before the study name) on the study Information Sheet, consent form and recruitment literature and in all future correspondence with us regarding this application.

I am sure that once we receive the amendments as requested we will be able to arrange for speedy approval. Please submit one copy of the revised sections of the application and a cover letter detailing the changes made to the PNM RESC using the contact details provided at the top of this letter.

Please note that research involving human participants must not commence until full ethical approval has been granted.

With best wishes

Yours sincerely

Riina Heinonen – Research Ethics Officer
For and on behalf of
Professor Gareth Barker, Vice-Chairman
Psychiatry Nursing & Midwifery Research Ethics Subcommittee

c.c.
Graham Thornicroft

Maya Semrau
Flat 4 10 BN1 1UB
Marlborough Place
Brighton
BN1 1UB

16 September 2009

Dear Maya Semrau

PNM/08/09-137 Development of a scale to assess perceived needs in emergency-affected populations - stage 4

Thank you for sending in the amendments requested to the above project. I am pleased to inform you that these meet the requirements of the PNM RESC and therefore that full approval is now granted. Please note that this approval is on the condition that you inform the committee as soon as possible once the research location(s) are known.

Please ensure that you follow all relevant guidance as laid out in the King's College London Guidelines on Good Practice in Academic Research (http://www.kcl.ac.uk/college/policyzone/attachments/good_practice_May_08_FINAL.pdf) .

For your information ethical approval is granted until 16/09/2010. If you need approval beyond this point you will need to apply for an extension to approval at least two weeks prior to this explaining why the extension is needed, (please note however that a full re-application will not be necessary unless the protocol has changed). You should also note that if your approval is for one year, you will not be sent a reminder when it is due to lapse.

If you do not start the project within three months of this letter please contact the Research Ethics Office. Should you need to modify the project or request an extension to approval you will need approval for this and should follow the guidance relating to modifying approved applications:
http://www.kcl.ac.uk/research/ethics/applicants/modifications.html

Any unforeseen ethical problems arising during the course of the project should be reported to the approving committee/panel. In the event of an untoward event or an adverse reaction a full report must be made to the Chairman of the approving committee/review panel within one week of the incident.

Please would you also note that we may, for the purposes of audit, contact you from time to time to ascertain the status of your research.

If you have any query about any aspect of this ethical approval, please contact your panel/committee administrator in the first instance (http://www.kcl.ac.uk/research/ethics/contacts.html). We wish you every success with this work.

With best wishes

Yours sincerely

Helen English

Senior Research Ethics Officer

Maya Semrau
Flat 4
10 Marlborough Place
Brighton
BN1 1UB

08 March 2010

Dear Maya

PNM/08/09-137 Development of a scale to assess perceived needs in emergency-affected populations - stage 4

I pleased to inform you that the following modifications requests have now been approved:

1. Reduction in the number of sites used.
2. Study to be undertaken in Jordan.
3. Additional measures to be used.
4. Increase in the number of participants.

With best wishes

Rowena Lamb

Research Ethics Administrator

c.c. Professor Graham Thornicroft
Health Services Research

Maya Semrau
Flat 4
10 Marlborough Place
Brighton
BN1 1UB

22 April 2010

Dear Maya

PNM/08/09-137 Development of a scale to assess perceived needs in emergency-affected populations - stage 4

I pleased to inform you that your recent modification request to replace the Harvard Trauma Questionnaire (HTQ) with the traumatic events section of the Composite International Diagnostic Interview (CIDI) has been approved.

With best wishes

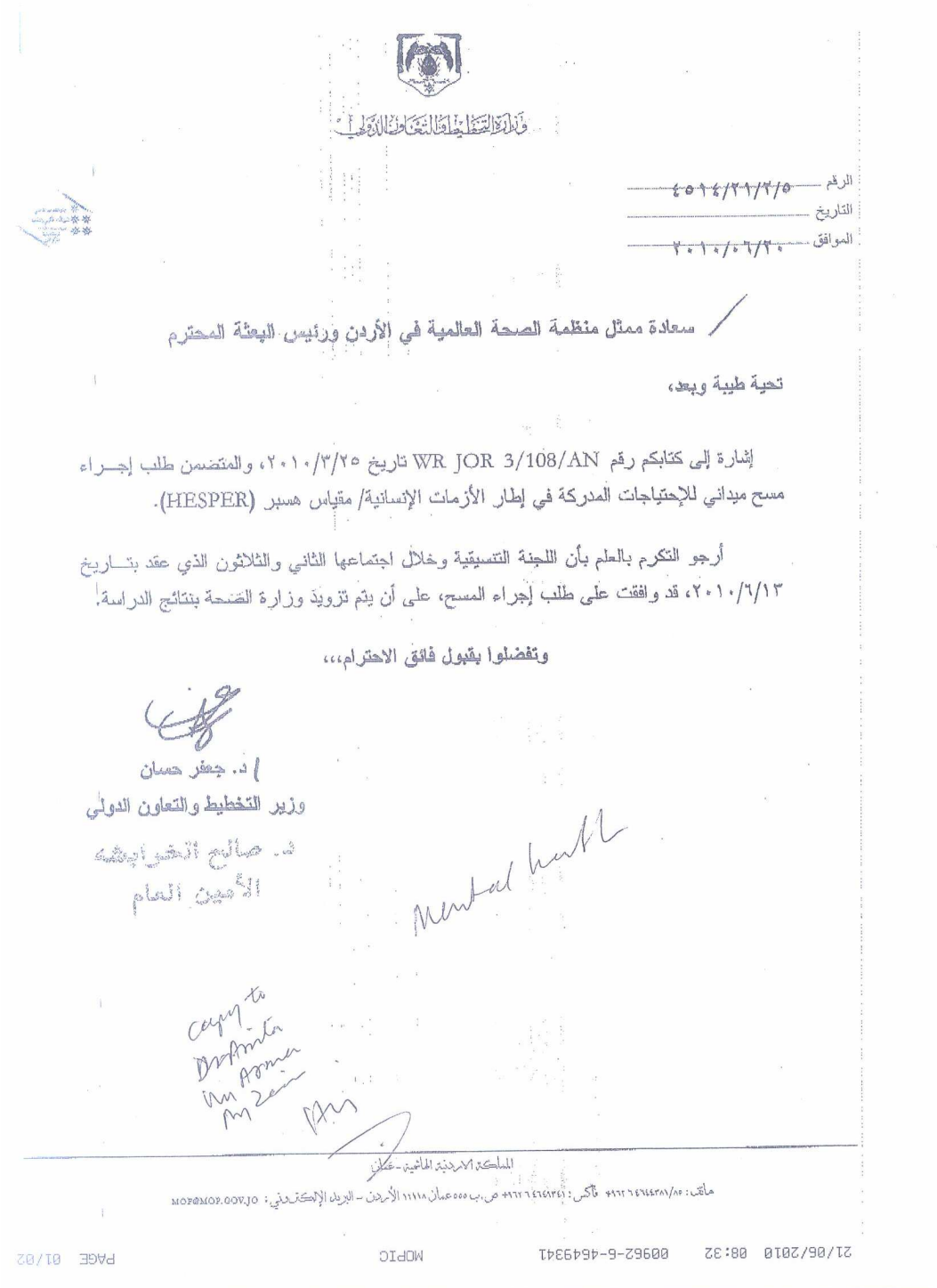
Jim Summers

Senior Research Ethics Officer

c.c. Professor Graham Thornicroft
Health Services Research

APPENDIX D6

Ethics approval letter from Jordanian ministries (field-testing)



وزارة التخطيط والتعاون الدولي

الرقم ٤٥١٤/٢١/٢/٥

التاريخ

الموافق ٢٠١٠/٠٦/٢٠

سعادة ممثل منظمة الصحة العالمية في الأردن ورئيس البعثة المحترم

تحية طيبة وبعد،

إشارة إلى كتابكم رقم WR JOR 3/108/AN تاريخ ٢٠١٠/٣/٢٥، والمتضمن طلب إجـراء مسح ميداني للإحتياجات المدركة في إطار الأزمات الإنسانية/ مقياس هسبر (HESPER).

أرجو التكرم بالعلم بأن اللجنة التنسيقية وخلال اجتماعها الثاني والثلاثون الذي عقد بتـاريخ ٢٠١٠/٦/١٣، قد وافقت على طلب إجراء المسح، على أن يتم تزويد وزارة الصحة بنتائج الدراسة.

وتفضلوا بقبول فائق الاحترام،،،

أ.د. جعفر حسان

وزير التخطيط والتعاون الدولي

د. صالح الشرايري

الأمين العام

copy to

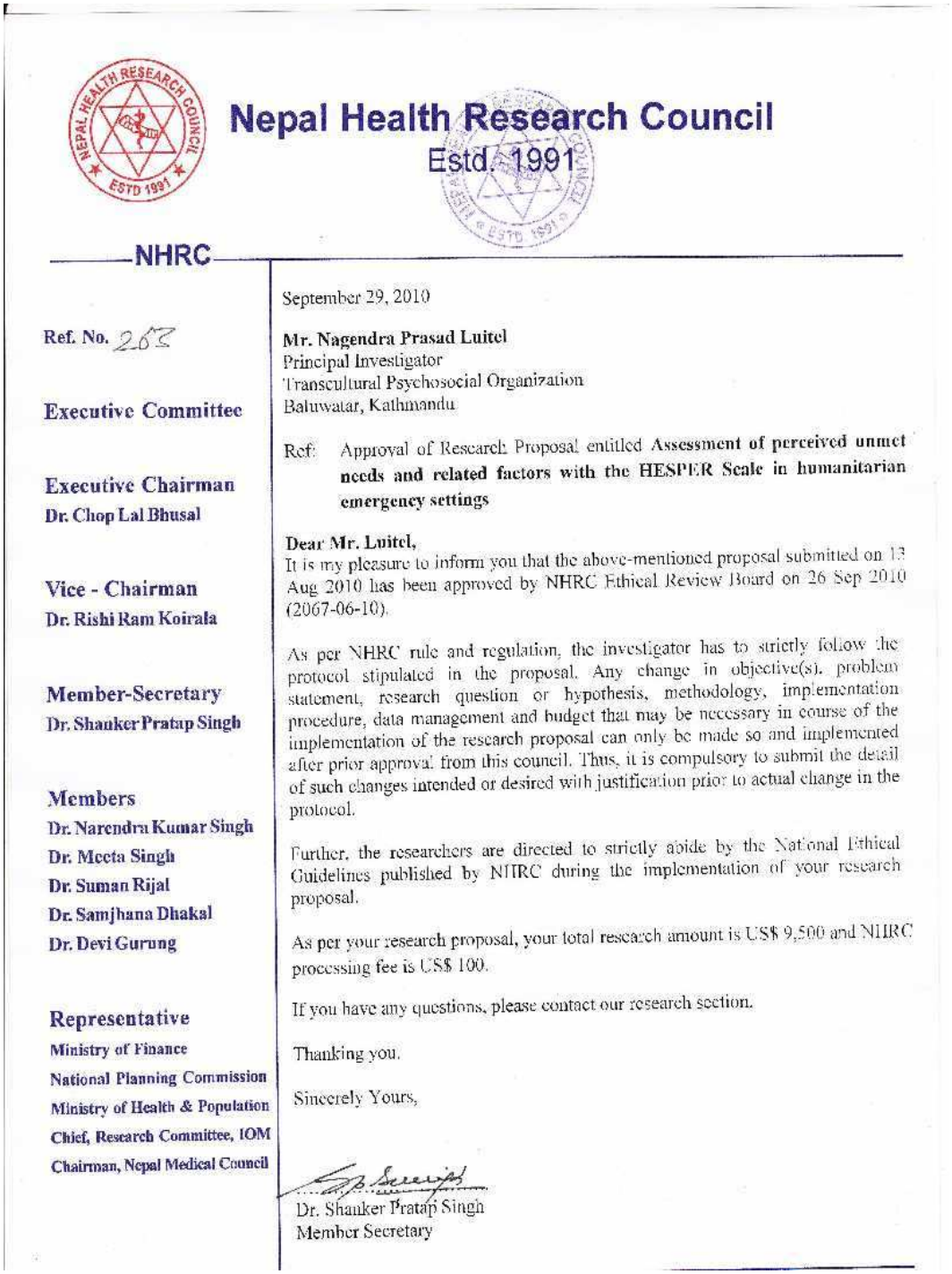
المملكة الاردنية الهاشمية - عمان

هاتف: ٥٨٠٨١٨١ ٦٤٦٤٤٣٨١ ٠٠٩٦٢+ فاكس: ٦٤٦٤٦٣٤١ ٠٠٩٦٢+ ص.ب ٥٥٥ عمان ١١١١٨ الأردن - البريد الإلكتروني: MOP@MOP.GOV.JO

21/06/2010 08:32 00962-6-4649341 MOPIC PAGE 01/02

APPENDIX D7

Ethics approval letter from Nepal Health Research Council (field-testing)



Nepal Health Research Council
Estd. 1991

NHRC

Ref. No. 263

Executive Committee

Executive Chairman
Dr. Chop Lal Bhusal

Vice - Chairman
Dr. Rishi Ram Koirala

Member-Secretary
Dr. Shanker Pratap Singh

Members
Dr. Narendra Kumar Singh
Dr. Meeta Singh
Dr. Suman Rijal
Dr. Samjhana Dhakal
Dr. Devi Gurung

Representative
Ministry of Finance
National Planning Commission
Ministry of Health & Population
Chief, Research Committee, IOM
Chairman, Nepal Medical Council

September 29, 2010

Mr. Nagendra Prasad Luitel
Principal Investigator
Transcultural Psychosocial Organization
Baluwatar, Kathmandu

Ref: Approval of Research Proposal entitled **Assessment of perceived unmet needs and related factors with the HESPER Scale in humanitarian emergency settings**

Dear Mr. Luitel,
It is my pleasure to inform you that the above-mentioned proposal submitted on 13 Aug 2010 has been approved by NHRC Ethical Review Board on 26 Sep 2010 (2067-06-10).

As per NHRC rule and regulation, the investigator has to strictly follow the protocol stipulated in the proposal. Any change in objective(s), problem statement, research question or hypothesis, methodology, implementation procedure, data management and budget that may be necessary in course of the implementation of the research proposal can only be made so and implemented after prior approval from this council. Thus, it is compulsory to submit the detail of such changes intended or desired with justification prior to actual change in the protocol.

Further, the researchers are directed to strictly abide by the National Ethical Guidelines published by NHRC during the implementation of your research proposal.

As per your research proposal, your total research amount is US$ 9,500 and NHRC processing fee is US$ 100.

If you have any questions, please contact our research section.

Thanking you.

Sincerely Yours,

Dr. Shanker Pratap Singh
Member Secretary

Appendices E –
Other project materials

APPENDIX E1
Development of First Draft HESPER Scale – Shortened version of MSc dissertation

Introduction

This Appendix describes the development of a first draft of the HESPER Scale, which was carried out as part of an MSc in Mental Health Services Research that the author completed at the Institute of Psychiatry (IoP), King's College London (KCL) in 2008 [194]. It represents a longer version of Section 3.7 of this thesis, and covers 'Phase 1' of the HESPER project, as highlighted in the box below.

- ***Phase 1 (2008):*** **Development of a first draft scale through a process of item generation and item reduction, based on first a literature review, and second a survey with humanitarian experts (Section 3.7 and Appendix E1).**
- *Phase 2 (2009):* Preparation of the draft scale for pilot-testing (Section 4.2). Pre-testing of the draft scale in the UK with refugees from the Democratic Republic of the Congo (DRC) (Section 4.3), and subsequent pilot-testing in Jordan with displaced Iraqi people, and with the local populations in Gaza and Sudan (Section 4.4), to assess the scale's feasibility, intelligibility, comprehensiveness and cultural applicability, to determine the suitability of training materials, and to establish face and content validity. Expert survey on the ideal length of the scale (Section 4.4).
- *Phase 3 (2010):* Field-testing of the revised draft scale in Jordan with displaced Iraqi people, in Haiti with people living in post-earthquake displacement camps, and in Nepal with Bhutanese refugees, to assess its psychometric properties (i.e. inter-rater and test-retest reliability, internal consistency, and criterion (concurrent) validity) (Chapter 5). Study to measure the level of perceived needs in these settings, and to assess the relationship between symptoms of common mental disorder, perceived unmet needs, and past traumatic events (Chapter 6).

Methods

Design

This part of the project involved the development of a first draft of the HESPER Scale through a two-stage process: Firstly the generation of items, and secondly their reduction and selection into the draft scale, in line with publications on the scientific procedures essential to scale development [103, 296] (see Section 2.4 of thesis for further details).

The item generation process involved a detailed review of, and the extraction of items from, peer-reviewed journal articles and grey literature. Subsequently items were selected and reduced into the draft scale through use of a specially-designed survey employing two participant groups of first international humanitarian experts, and second aid workers in Sierra Leone. The primary purpose of the survey was to gather a wide range of opinions to act as guide in deciding on suitable items for inclusion into the draft scale.

Item generation

Only sources which dealt directly with the perceived needs or views of emergency-affected populations in low- or middle-income countries were used, to reduce bias and to ensure that affected population's views were taken into account in accordance with the project's aims. See Table E1 for an overview of the sources employed.

Table E1 Sources employed in the item generation process

Source	Country of study	Type of disaster	Period of data collection	Type of data collection
Asia				
Fritz Institute (2005) [196]	Indonesia, India, Sri Lanka	tsunami	Oct 2005	structured interviews
Fritz Institute (2007) [197]	Indonesia	earthquake	May – June 2006	face-to-face interviews with structured questionnaire
Fritz Institute (2007) [198]	Indonesia	tsunami	July 2006	face-to-face interviews with structured questionnaire
Poudyal et al (2007) [64]	Indonesia	conflict	Sept 2006	free-listing exercises, key informant interviews, focus groups
Thapa and Hauff (unpublished) [199]	Nepal	conflict	June – July 2003	cross-sectional household survey
Fritz Institute (2006) [200]	Pakistan	earthquake	Aug 2006	structured interviews
Africa				
Barton et al (1998) [201]	Uganda	conflict	Jan – Apr 1998	key informant interviews, focus groups
Betancourt et al (2009) [202]	Uganda	conflict	July – Aug 2004	free-listing exercises, key informant interviews
Bolton and Ndogoni (2000) [203]	Rwanda	conflict and genocide	Oct – Dec 1999	free-listing exercises, key informant interviews, pile sorts
Lee and Bolton (2007) [204]	Kenya	conflict	Oct – Nov 2005	free-listing exercises, key informant interviews

Murray et al (2006) [205]	DRC (Congo)	conflict	Feb 2006	free-listing exercises, key informant interviews
Briant and Kennedy (2004) [195]	Egypt	conflict	not known	interviews with questionnaires
<u>Middle East</u>				
Giacaman et al (2007) [206]	Palestine	conflict	Sept – Nov 2004	focus groups
<u>Central America</u>				
Pérez-Sales et al (2005) [8]	El Salvador	earthquakes	Apr 2001	semi-structured interview (CCI), including qualitative responses, focus groups

All items mentioned in any of the 14 sources were compiled indiscriminately into a long list of 302 items, and were then reduced into a shorter list of 38 items. In devising the shorter list, generally all need items which had been mentioned by at least two sources were included. However, to achieve a more similar level of specificity across items and to limit the number of items, some of the items from the long list were grouped together to form a single item. Need items were expressed in terms of problems rather than as solutions or service response, consistent with the Camberwell Assessment of Need (CAN) [175] and with humanitarian methods [49, 50]. Problems are thereby simply identified rather than a solution to the problem being imposed, which helps in distinguishing problems from the formulation of solutions more clearly [50]. The 38 items were incorporated into the expert survey for assessment by participants.

Item selection

Sample

Purposive sampling techniques were employed. Humanitarian experts were chosen as participants to allow for relatively quick and easy data collection within the restricted timeframe of the author's MSc. 64 experts were identified

and invited to participate (see Table E2). Participants were stratified across gender, according to whether they were psychosocial experts or general emergency experts, and in terms of their country of origin (high-income country (HIC) versus low- or middle-income country (LMIC)). Two expert participants were also recruited through snowball sampling methods, whereby participants suggested other suitable candidates (see 'Acknowledgements' section of thesis for a list of participants).

Table E2 Number of participants who completed the survey across strata (total number of persons who were invited to participate in brackets)

	Country of origin			
	LMIC		**HIC**	
Type of expert	**male**	**female**	**male**	**female**
General experts	3 (3)	1 (1)	6 (12)	4 (7)
Psychosocial experts	7 (10)	6 (10)	8 (11)	8 (10)
Local aid workers in Sierra Leone	3 (4)	3 (3)	0 (0)	0 (0)

Humanitarian aid workers were highly suitable as participants, since the scale was likely to be administered by this group. Aid workers were invited to participate as part of a workshop in Sierra Leone, of which the primary purpose was to plan the data analysis and documentation of a project on participatory action research with girl mothers. One further participant was recruited through snowball sampling by one of the workshop participants, resulting in a total of seven aid workers who were invited to participate (see Table E2).

Procedure

Ethical approval was obtained through the KCL Psychiatry, Nursing and Midwifery Research Ethics Committee (PNM/07/08-22). A specially-designed survey was pilot-tested with three humanitarian experts, and data was subsequently collected over a six-week period throughout June and July 2008.

The survey included quantitative sections in which participants rated the 38 need items that had been compiled in the item generation process on an 11-point scale (0 to 10) of importance ('Part A'), and suggested and rated any additional items for inclusion into the draft scale ('Part B'), as well as a free-text section in which participants were invited to make any further comments on the individual items or overall scale ('Part C').

Humanitarian expert participants received and returned the survey by email. Initially they received an invitation by email together with a 'Question and Answer' sheet about the HESPER Scale, and surveys were then sent by email to those who agreed to participate. Follow-up emails were sent to non-responders up to a maximum of three attempts.

Aid workers in Sierra Leone were given the participant information sheet and 'Question and Answer' sheet to read during the workshop within the Christian Children's Fund (CCF) Sierra Leone office in Freetown. In accordance with their preferences, participants completed the survey on paper in their spare time between workshop sessions and returned them to the workshop organiser at one of the sessions.

Analyses

Quantitative analyses

Data were stored in Microsoft Office Excel (2007) [268] and were double-checked to ensure accuracy. Data analyses were performed within SPSS (Windows Version 15.0 [243]) by the author.

The primary purpose was to obtain an overall response pattern to guide decision-making in the selection of items into the draft scale. To provide an overview of participants' ratings in 'Part A' of the survey, means of ratings were calculated for each of the 38 items. Ratings were also classed into categories of 0

– 3, 4 – 6 and 7 – 10, and ratings were presented as proportions for each item across these categories. To assess whether to include any additional items into the draft scale, items that were mentioned by at least two participants in 'Part B' of the survey were coded and categorised into new items. Mean ratings for each of these items, as well as the frequency with which it had been mentioned, were then calculated.

To assess whether it was adequate to consider participants' responses combined rather than across different participant groups, between-group differences of ratings were tested using independent t-tests and ANOVA. Since between-group differences per se were not the primary purpose of data analysis, and to avoid data-dredging and false-positive errors given the large number of items, analyses were performed in terms of participants' overall mean ratings rather than for each individual item.

Chi-square tests (χ^2) were employed to check for any bias in response rates and for differences between responders and non-responders in terms of gender, country of origin, and type of expert. Analyses were not performed for the eight strata (2 x 2 x 2) separately due to the very low frequencies within several strata (see Table E2 on page 414). Reasons for non-response were also described.

Free-text analyses

The main purpose for the analyses of data collected in 'Part C' of the survey was to provide feedback on the proposed scale, and to aid the regrouping and rephrasing of items. Since there was no theory being developed from the data, a synopsis based on arising themes was developed to provide an overview of participants' responses. Data was ordered and grouped into categories [245]. Any free-text data which related to particular items (for instance in terms of the regrouping or rephrasing of items) was listed alongside quantitative data to provide an overview of both quantitative and free-text responses for each individual item. More general free-text data was summarised in terms of

different themes in Microsoft Office Word (2007) [244]. Although more complex quantitative analyses of coded free-text data were not conducted [235, 237, 245, 246], simple counts were performed to gain information on the frequency and typicality of a coded response [236, 245].

Following the data analyses, a teleconference was held by the HESPER project's steering committee to discuss and revise the items in developing the first draft scale.

Results – Quantitative analyses

Survey response analysis

The response rate was 69.0% (49/71) for all participants combined; 67.2% (43/64) for humanitarian experts, and 85.7% (6/7) for aid workers (also see Table E2). Table E3 displays the response rates across different participant groups. There were no statistically significant differences between responders and non-responders in terms of gender, country of origin, or type of expert.

Table E3 Response rates by participant group

Participant groups	**Response rates**
Gender[1]	
Male	67.5%
Female	71.0%
Country of origin[2]	
LMIC	74.2%
HIC	65.0%
Type of expert[3]	
General	60.9%
Psychosocial	70.7%
Aid worker	85.7%

[1] p=.75* [2] p=.41* [3] p=.43*

* significance level of 5%

Table E4 shows the reasons for non-participation.

Table E4 Reasons for non-response by participants

	No response to invitation	Survey not returned	Refusal
Humanitarian experts	5	15	1
Aid workers	0	0	1

Analysis of 'Section A' of survey

Table E5 displays the differences in mean ratings across participant groups. Mean ratings for items were similar across groups, and no significant differences were found. Results were therefore considered combined across the strata of participants to obtain an overall response pattern of ratings.

Table E5 Between-group differences in mean ratings of items by participant group

Participant groups	Mean	Standard deviation	Difference in means	95% CIs for difference in mean	Test statistic
Gender			-0.03	(-.062 – 0.56)	p=.92*
Male	7.16	0.93			
Female	7.19	0.98			
Country of origin			0.04	(-0.61 – 0.7)	p=.89*
LMIC	7.24	1.33			
HIC	7.2	0.95			
Type of expert			N/A	N/A	p=.62*
General	7	0.94			
Psychosocial	7.26	0.95			
Aid worker	7.53	2.17			

*significance level of 5%

In Table E6 are presented the mean ratings for each of the 38 items in order of mean ratings. All items were rated of at least moderate importance by participants on average, with mean ratings ranging from 4.88 (SD=3.27) to 9.39 (SD=1.15). The overall mean for all items combined was 7.22 (SD=2.47). Table E6 also shows ratings according to the proportions with which each item was rated as 0–3, 4–6, and 7–10. Overall, 9.4% of items were rated as 0–3, 23.5% as 4–6, and 67.2% as 7–10 across participants.

Table E6 Overview of ratings of items in expert survey in order of mean ratings, as well as suggested changes to items by participants

Items	Mean rating	% rating 0 – 3 (absolute frequency)	% rating 4 – 6 (absolute frequency)	% rating 7 – 10 (absolute frequency)	Suggestions for changes to items by participants (number of participants)
1. Water	9.39 (SD=1.15)	0% (0)	4.1% (2)	95.9% (47)	Combine with hygiene and sanitation / toilets (1). Combine with sanitation / toilets (1). Differentiate between water for drinking and cooking, bathing, and washing (1).
2. Security / safety	9.1 (SD=1.16)	0% (0)	4.1% (2)	95.9% (47)	Include child protection, criminal activity, domestic violence, and violence against women in the community (1). Include criminal activity, domestic violence, and violence against women in the community (1). Separate into e.g. risk of attack/abduction by armed groups, risk of GBV, threat of being detained and tortured etc (1). Give more details / examples (1).
3. Shelter / housing	8.92 (SD=1.81)	2.0% (1)	4.1% (2)	93.9% (46)	Separate into immediate shelter (tarpaulins) and the rebuilding or repairing of existing housing (1). Include intimacy (1). Include cooking items/ facilities (1).
4. Food / nutrition	8.8 (SD=1.78)	4.1% (2)	2.0% (1)	93.9% (46)	Nutrition not as important as food (2). Limit to the perceived minimum necessary for survival in order to distinguish from cooking items / facilities and cultural practices (1).

5.	Sanitation / toilets	8.29 (SD=1.98)	2.0% (1)	12.2% (6)	85.7% (42)	Combine with hygiene and water (1). Combine with water (1). Distinguish more from hygiene; include soap, toothpaste, sanitary materials for women etc (1).
6.	Money / livelihood / employment	8.18 (SD=2.05)	4.1% (2)	12.2% (6)	83.7% (41)	
7.	Physical health*	8.15 (SD=2.24)	4.2% (2)	14.6% (7)	81.3% (39)	Would speak of health care (1).
8.	Psychological distress	8.06 (SD=1.53)	0% (0)	12.2% (6)	87.8% (43)	Should be framed in terms of problems with mental functioning (1). Add 'emotional' to item (1).
9.	Family tracing	8 (SD=2.17)	8.2% (4)	8.2% (4)	83.7% (41)	Should include extended family as well as immediate family (1). Should include information about family (1). Should include separation from family (1).
10.	Care of family members	7.94 (SD=2.08)	8.2% (4)	8.2% (4)	83.7% (41)	Combine with child-care (2). Combine with care of abandoned persons in the community (1).
11.	Displacement / uprooting*	7.94 (SD=2.2)	6.4% (3)	10.6% (5)	83.0% (39)	Exclude (1). Unclear (1). Extend to include being away from their usual resources and adaptation to a new situation (1).

12. Information	7.82 (SD=2.16)	6.1% (3)	18.4% (9)	75.5% (37)	Combine with fair distribution of aid (1). Information about family members important (1).
13. Child-care	7.71 (SD=2.3)	6.1% (3)	14.3% (7)	79.6% (39)	Combine with care of family members (2). Include child-friendly spaces (1).
14. Hygiene	7.71 (SD=2.03)	4.1% (2)	20.4% (10)	75.5% (37)	Combine with sanitation and water (1). Distinguish more from sanitation / toilets (1). Expand description (1).
15. Education for children	7.63 (SD=1.68)	2.0% (1)	18.4% (9)	79.6% (39)	
16. Care of abandoned persons in the community	7.63 (SD=2.33)	6.1% (3)	22.5% (11)	71.4% (35)	Combine with care of family members (1). Separate issues out (1). Avoid term 'abandoned' (e.g. 'separated' instead) (1).
17. Fair distribution of aid	7.61 (SD=2.1)	2.0% (1)	20.4% (10)	77.6% (38)	Combine with information (1). Too restrictive, include discrimination and exclusion (1).
18. Burials / funerals / disposal of bodies*	7.55 (SD=2.66)	8.5% (4)	23.4% (11)	68.1% (32)	
19. Child protection*	7.5 (SD=2.16)	6.3% (3)	20.8% (10)	72.9% (35)	Include under security / safety (1).

20. Dignity / respect*	7.37 (SD=2.44)	10.9% (5)	13.0% (6)	76.1% (35)	Unclear (1). Framed incorrectly (1).
21. Cooking items / facilities	7.37 (SD=2.33)	8.2% (4)	24.5% (12)	67.4% (33)	Include under shelter (1). Limit to the mechanical in order to distinguish from food / nutrition and cultural practices (1).
22. Violence against women in the community*	7.35 (SD=1.96)	4.2% (2)	25.0% (12)	70.8% (34)	Include under security / safety (2). Expand into violence in its different forms (1). Extend to both genders (1). Extend to both genders and children (1). Combine with domestic violence (1).
23. Clothing	7.18 (SD=2.36)	10.2% (5)	26.5% (13)	63.3% (31)	Include under broader category (1).
24. Social support	7.14 (SD=2.15)	6.1% (3)	26.6% (13)	67.4% (33)	Separate into support by family, support by community members, and support by tribe/clan/ethnic group (1). Reword (make clearer) (1).
25. Domestic violence	6.9 (SD=2.11)	6.3% (3)	29.2% (14)	64.6% (31)	Include under security / safety (2). Combine with violence against women in the community (1).
26. Bedding / blankets	6.8 (SD=2.81)	12.2% (6)	28.6% (14)	59.2% (29)	Too narrow (1).

27. Religious / cultural / spiritual practices	6.65 (SD=2.28)	10.2% (5)	26.5% (13)	63.3% (31)	Include aspects of food and cooking that are important to cultural cohesion and identity (1).
28. Participation / decision-making	6.61 (SD=2.22)	10.2% (5)	32.7% (16)	57.1% (28)	Should be broader than just aid response (1).
29. Criminal activity*	6.6 (SD=2.36)	10.6% (5)	34.0% (16)	55.3% (26)	Include under security / safety (2). Broaden into insecurity (1).
30. Daytime activities for youth	6.31 (SD=2.36)	12.2% (6)	38.8% (19)	49.0% (24)	Combine with daytime activities for adults (1).
31. Child-friendly spaces	5.96 (SD=2.41)	18.4% (9)	40.8% (20)	40.8% (20)	Include under child-care (1).
32. Transport	5.88 (SD=2.29)	14.3% (7)	49.0% (24)	36.7% (18)	
33. Mental illness	5.86 (SD=2.26)	14.3% (7)	44.9% (22)	40.8% (20)	Related to care of family members (1).
34. Legal rights	5.84 (SD=2.7)	20.4% (10)	30.6% (15)	49.0% (24)	Too broad (1).
35. Daytime activities for adults*	5.67 (SD=2.41)	14.3% (7)	53.1% (26)	32.7% (16)	Combine with daytime activities for youth (1).

36. Drugs	5.06 (SD=2.68)	30.6% (15)	38.8% (19)	30.6% (15)	Combine with alcohol (5). Separate use from abuse (1).
37. Political freedom	5.04 (SD=2.3)	25.0% (12)	55.1% (27)	20.4% (10)	Exclude (1). Extend into freedom of expression and persecution (1). Expand description (1).
38. Alcohol*	4.88 (SD=3.27)	37.5% (18)	22.9% (11)	39.6% (19)	Combine with drugs (5). Separate use from abuse (1).

* Missing data.

Analysis of 'Section B' of survey

31 participants (63.3%) suggested at least one additional item for inclusion into the draft scale, with a mean of 3.32 (SD=2.37) additional items listed by those participants who mentioned at least one item (mean rating = 7.92, SD=1.61), and a mean of 2.1 (SD=2.48) additional items suggested across all participants. In Table E7 are displayed those items that did not appear to be sufficiently covered under any of the original items, and that were suggested by at least two participants. Also listed are the sub-items underlying the new items as phrased by participants.

Table E7 New additional items suggested by at least two participants in 'Part B' of the survey (in brackets are listed subcategories assigned to the item)

Items grouped by category	**Number of participants**	**Mean rating**
Health care* (includes *aspects related to health, immunization, medications, health care for people with chronic illness, primary health care services or mobile clinics, physiotherapy*)	7 (14.3%)	8.44 (SD=1.33)
Freedom of movement* (includes *access to things to meet daily needs, access to family because of closures, access to home, access to markets, access to land*)	4 (8.2%)	8.71 (SD=0.95)
Reproductive and sexual health* (includes *reproductive health services, women health care, family planning services, potential for safe delivery and maternal care, HIV and STI services, contraception / SRH services*)	3 (6.1%)	7.83 (SD=1.33)

* Please note that each participant may have mentioned an item more than once as various subcategories.

Results – Free-Text Analyses

Any comments made about individual items are listed in Table E6 on pages 420 to 425 alongside the quantitative data.

Overall, most participants responded positively to the development of the scale, were happy to cooperate, and provided encouraging feedback. It was suggested by several participants that the proposed scale would fill an important gap, with seven participants directly commenting on the potential usefulness and importance of the scale. Only two participants considered the development of such a scale to be of limited value or unnecessary, with one of them considering qualitative methods of data collection to be more useful. The survey seemed to be understood by participants generally, with only one respondent querying what was required of them.

Items

The list of items also generated mainly positive responses, with eight participants providing direct positive feedback on it. One participant for instance commented that "the items cover major perceived needs and clearly take into consideration many international guidelines. All the items are carefully chosen, and the chore general list is holistic" (participant 8).

However, it was remarked several times that some of the items may need rewording or regrouping, with one participant noting that "there is lack of consistency in level of detail of the items with...(some) being overly general, and others being overly specific" (participant 47). Two participants commented that ordering the items alphabetically was not appropriate but that rather basic needs should be listed first. Two participants saw the benefit in retaining most items in the scale, since as one of the participants noted

> "Surely if you want a scale that encompasses their frame of reference not ours you need to be aiming for a wide angle and including as many possibilities – this may mean a 40 item scale but it can still be rapidly administered and gives people a better chance to state their perceived needs" (participant 19).

Six participants suggested categorising the individual items into more general items, for instance either under broader headings, or by clustering items, either in terms of physical, psychological or physical needs, according to gender or age

groups, or by distinguishing needs present before and ones directly related to the emergency. One of these participants noted that

> "To facilitate the handling of the results, it may be practical to group the different aspects under broader headings such as health related...general social services, education, food and nutrition etc. This would allow the user of the scale a quick appreciation of which "sector" is underdeveloped or perceived as such by the beneficiaries" (participant 20).

Two participants felt it to be problematic that some items related to all members of the population (for example 'Food'), whereas other items were relevant only to particular groups (for instance 'Mental illness'), in particular that when attempting

> "to get a hierarchy of needs through a simple voting system, that will lead to prioritizing those needs that are mentioned by most, but are not necessarily reflecting the needs of vulnerable minorities" (participant 49).

A further participant suggested changing the direction of the question to ask about problems in the community (rather than the individual) to avoid respondents telling their personal stories around the problem, thereby running less of a risk of re-traumatisation of the respondent by the interviewer, and to target the community rather than individuals.

<u>Format of scale</u>

Several participants made comments about the proposed format of the scale. Four participants suggested changing the rating scale (for instance to a Likert scale). One participant commented

> "I am unclear why you have chosen to only use a three point response from the respondents i.e.: Need met, unmet or no need. I would think it will be difficult to establish priorities this way. Every need unmet does not necessarily hold the same weight. I'd suggest that at the end of the completion of the questionnaire you could review the list of UNMET needs with each respondent and then ask him or her to prioritize 1, 2, 3. Then, you'd have some sense of priorities. If you don't do this I would guess that in many emergencies

> your end result could just be all needs are unmet. Then what? Where does the intervention begin? What needs to be addressed first? How large is each problem?" (participant 23).

Five participants recommended including space for qualitative data to complement the quantitative data (for example brief optional free talking after each item or at the end of the scale). It was commented that

> "In our experience it is very difficult to get much sense from the quantitative answers without some minimal free talk on it with the refugee person...It is amazing to see that people give a lot of ideas if they are allowed to express so" (participant 25).

One participant also pointed out that some qualitative information may be necessary in order to translate back answers, since some of the items may be difficult to understand in non-Western cultures.

<u>Development process</u>

Other responses referred to the developmental process of the scale. One participant, for instance, highlighted the importance of involving affected populations in the development of the scale, in particular that

> "It is impossible to rank from the perspective of being an adult survivor as I clearly am not one. Therefore I'm interested to know whether this ranking exercise has or will be undertaken by actual adult survivors who have personal experience of the identified items. I believe this would provide the scale far more credibility" (participant 38).

Similarly, another participant pointed out that the perceptions of what humanitarian experts think affected populations need may not reflect what affected populations actually perceive their needs to be:

> "…what I would suggest should be on the list is actually not the same as what I would think people would say…Part of the difference is due to our ignorance and part is due to differences between us and the population as to the best solutions for their problems" (participant 15).

Context

One of the most frequently made comments by participants related to the expected difficulties in assessing needs across diverse contexts. Twelve participants pointed out that needs may vary according to the type of disaster (for instance conflict versus natural disaster) and setting (such as Africa versus Asia, flood plains versus desert area, camp versus non-camp setting, cultural differences, seasonal variations etc). One participant commented

> "...when I tried to answer your questions, it felt different in my brain whether I put on the hat of a Sudanese versus a Cambodian, Sri Lankan, Tibetan or Burundian refugee. And accordingly, the score to that question oscillated depending on the site or country I had in mind" (participant 36).

Nine participants (many of them were the same persons who had commented on the above) remarked that needs may also differ throughout the various stages of the emergency (such as acute stage versus post-emergency), for instance that

> "I would caution that priorities shift or change with time and events. In my experience, what people focus on within the first weeks is very different from what their concerns are a month or six months after the onset of an emergency" (participant 30).

Furthermore, it was noted by one participant that the meaning of items may change over time (for instance that in the very beginning problems with 'Food/nutrition' may refer to 'having something to eat in order not to starve' while later on it might refer to 'having something else to eat apart from the same beans and soup again'), and that the perception of needs may also vary across individuals. Participants expressed concerns about whether it was possible to develop a scale that is capable of sufficiently capturing these changes and is applicable for the different contexts. One participant therefore suggested having a menu of questions which could be assembled into a contextually relevant questionnaire depending on the situation.

Several participants also pointed out that these issues made the rating of items somewhat difficult in terms of prioritising needs. Two participants stated that they had therefore focused more on the needs in the early acute stages of an emergency whilst completing the survey, and that

> "All items are very important, the level of importance varies according to the type of disaster and the time during which the questionnaire will be administrated...My answers were more focusing on the perceived needs of the population in the early stages of a natural disaster, as this is where my experience lies" (participant 8).

Development of first draft of the scale

Changes made to items following data analyses are displayed in Table E8. Since all 38 items were rated as at least moderately important by survey participants, a broad approach was taken in the selection of items into the first draft scale. The revision of items therefore primarily involved their rephrasing and regrouping. Only one item was excluded ('Political freedom'), since it was felt that its inclusion may potentially deter affected populations from participating in the needs assessment or may even put them at risk in repressive cultures. One new item ('Health care') was added into the draft scale based on participants' responses in 'Section B' (see Table E7 on page 426) (this item also includes reproductive health and sexual health). The only other additional item suggested by participants, 'Freedom of movement', was included under the already existing item 'Transport' (see Table E8). Consequently, the first draft of the HESPER Scale consisted of 32 items.

One change was also made to the format of the HESPER Scale based on a participant's response. A section was introduced whereby those needs which have been rated as unmet are ranked in order of importance to enable prioritisation of needs and emergency relief to those areas where it is perceived to be needed most, where numerous needs are unmet (i.e. a section where participants list their three most serious problems).

Table E8 Changes made to items listed in the survey following data analyses. Revised items formed the first draft scale (new, excluded, or modified items italicised).

Survey items		Draft scale items	
1.	Alcohol	1.	Alcohol
2.	*Bedding/blankets*[1]		
3.	*Burials/funerals/disposal of bodies*[2]	*2.*	*Burials/funerals disposal of human remains*
4.	*Care of abandoned persons in the community*[3]	*3.*	*Care of unaccompanied persons in the community*
5.	Care of family members	*4.*	Care of family members
6.	*Child-care*[4]		
7.	*Child-friendly spaces*[5]		
8.	Child protection	*5.*	Child protection
9.	*Clothing*	*6.*	*Clothing/Bedding*
10.	Cooking items/facilities	7.	Cooking items/facilities
11.	*Criminal activity*[6]		
12.	*Daytime activities for adults*[7]	*8.*	*Daytime activities*
13.	*Daytime activities for youth*		
14.	*Dignity/respect*[8]	*9.*	*Disrespect/humiliation*
15.	Displacement/uprooting	10.	Displacement/uprooting
16.	*Domestic violence*[9]		
17.	Drugs	11.	Drugs
18.	Education for children	12.	Education for children
19.	Fair distribution of aid	13.	Fair distribution of aid
20.	*Family tracing*[10]	*14.*	*Separation from family members*
21.	Food/nutrition	15.	Food/nutrition
22.	*Hygiene*[11]	*16.*	*Personal hygiene*
23.	Information	17.	Information
24.	*Legal rights*[12]	*18.*	*Law and justice*
25.	Mental illness	19.	Mental illness
26.	*Money/livelihood/employment*[13]	*20.*	*Income/livelihood*
27.	Participation/decision-making	21.	Participation/decision-making
28.	Physical health	22.	Physical health
29.	*Political freedom*[14]		
30.	*Psychological distress*[15]	*23.*	*Emotional distress*
31.	Religious/cultural/spiritual practices	24.	Religious/cultural/spiritual practices
32.	Security/safety	25.	Security/safety
33.	*Sanitation/toilets*[16]	*26.*	*Toilets*
34.	Shelter/housing	27.	Shelter/housing
35.	Social support	28.	Social support
36.	*Transport*[17]	*29.*	*Freedom of movement and transport*
37.	*Violence against women in the community*[18]	*30.*	*Violence against women*
38.	Water	31.	Water
		32.	*Health care*[19]

[1] *Merged with 'clothing'.*
[2] *Rephrased.*
[3] *Rephrased.*
[4] *Covered under 'care of family members'.*
[5] *Covered under 'child protection'.*
[6] *Covered under 'security / safety'.*
[7] *Merged with 'daytime activities for youth'.*
[8] *Rephrased*
[9] *Merged with 'violence against women in the community'.*
[10] *Rephrased.*
[11] *Rephrased.*
[12] *Rephrased.*
[13] *Rephrased.*
[14] *Excluded.*
[15] *Rephrased.*
[16] *Rephrased.*
[17] *Rephrased.*
[18] *Merged with 'domestic violence'.*
[19] *New item.*

Discussion

Main Findings

This part of the project involved the successful development of the first draft HESPER Scale. Quantitative data was useful for the selection of items into the draft scale, and showed that the proposed list of items was considered acceptable and comprehensive by expert participants; this provided preliminary support for face validity and content validity of the draft scale (see Section 2.4 of this thesis for a description of these concepts) [103]. All items were rated of at least moderate importance on average, and around two thirds of items were rated as 7 or above overall (out of a possible 10). One further item was added to the draft scale based on participants' responses.

Free-text data was valuable in guiding the rewording or regrouping of items, in gaining feedback on the scale development process, as well as providing suggestions for future work. Free-text responses on the whole indicated that the proposed scale was considered useful and called for, and that the list of items was comprehensive and appropriate. Several items were rephrased or regrouped based on participants' comments and a revision was made to the format of the scale in terms of the prioritisation of unmet needs. This may facilitate prioritisation of needs and emergency relief to those areas where it is perceived to be needed most. The section may be particularly useful in settings where the level of need is very high overall, resulting in a large number of HESPER items being rated as unmet need by participants.

Limitations

Several participants raised concerns about the feasibility of developing a scale which is applicable across different settings, types and phases of humanitarian emergencies. To address this variation in social and cultural contexts, the HESPER Scale was developed to allow for some flexibility and rapid adaptation by allowing space for locally-specific needs aside from the universal items (see list of criteria in Section 3.2 of thesis).

Moreover, it is possible that the list of items may have been somewhat biased, since the data were collected for a different purpose, and since there may have been unknown limitations and biases in the data, for instance in terms of representativeness and being restricted to the English language [236]. Furthermore, the list of items may have been subject to some bias in terms of the selection and grouping of items based on the HESPER project steering committee's views [236, 327]. However, since the selection of items into the draft scale was subsequently guided by participants' responses, this should have hopefully reduced or exposed any biases imposed by the steering committee.

Furthermore, since purposive sampling was employed, it is possible that participants were not representative of humanitarian experts or aid workers as a whole. In particular, aid workers and general humanitarian experts from low- and middle-income countries (especially women) were underrepresented. However, since response rates were acceptable, and since there did not appear to be substantial differences between responders and non-responders, or in participants' ratings across participant groups, it is unlikely that the selection or non-response of particular individuals within these participant groups biased the development of the first draft scale.

What is more likely to have biased results however is the choice of participant groups. Possibly the main limitation of this phase of the project was that participants may not have had an accurate representation of what affected populations perceive their needs to be (as was indeed pointed out by several participants). This may have distorted ratings, and may have lead to inappropriate items having been selected into the draft scale, or important items having been missed.

Further work

To counter these potential biases, as part of the author's PhD programme, the draft HESPER Scale was subsequently pilot-tested and reviewed in relevant populations affected by humanitarian emergencies (see Chapter 4 of thesis), in

line with the project's aims of taking affected populations' views into account in the scale development process, and was then field-tested in humanitarian settings in low- and middle-income countries for its psychometric properties (see Chapter 5 of thesis).

APPENDIX E2
Camberwell Assessment of Need Short Appraisal Schedule (CANSAS)

CANSAS/5

Camberwell Assessment of Need Short Appraisal Schedule

User/Client name	Need rating 0 = no problem 2 = unmet need 1 = met need 9 = not known

Assessment number	1	2	3	4
Circle who is interviewed (U=User, S=Staff, C=Carer)	U / S / C	U / S / C	U / S / C	U / S / C
Date of assessment				
Initials of assessor				

1	**Accommodation** *What kind of place do you live in?*				
2	**Food** *Do you get enough to eat?*				
3	**Looking after the home** *Are you able to look after your home?*				
4	**Self-care** *Do you have problems keeping clean and tidy?*				
5	**Daytime activities** *How do you spend your day?*				
6	**Physical health** *How well do you feel physically?*				
7	**Psychotic symptoms** *Do you ever hear voices or have problems with your thoughts?*				
8	**Information on condition and treatment** *Have you been given clear information about your medication?*				
9	**Psychological distress** *Have you recently felt very sad or low?*				
10	**Safety to self** *Do you ever have thoughts of harming yourself?*				
11	**Safety to others** *Do you think you could be a danger to other people's safety?*				
12	**Alcohol** *Does drinking cause you any problems?*				
13	**Drugs** *Do you take any drugs that aren't prescribed?*				
14	**Company** *Are you happy with your social life?*				
15	**Intimate relationships** *Do you have a partner?*				
16	**Sexual expression** *How is your sex life?*				
17	**Child care** *Do you have any children under 18?*				
18	**Basic education** *Any difficulty in reading, writing or understanding English?*				
19	**Telephone** *Do you know how to use a telephone?*				
20	**Transport** *How do you find using the bus, tube or train?*				
21	**Money** *How do you find budgeting your money?*				
22	**Benefits** *Are you getting all the money you are entitled to?*				

A	**Met needs – count the number of 1s in the column**				
B	**Unmet need – count the number of 2s in the column**				
C	**Total number of needs – add together A + B**				

Appendices F –
Publications

APPENDIX F1

Paper on 'The development and psychometric properties of the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale'

The Development and Psychometric Properties of the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale

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Objectives. We developed the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale, a valid and reliable scale to rapidly assess perceived needs of populations in humanitarian settings in low- and middle-income countries.

Methods. We generated items through a literature review; reduced the number of items on the basis of a survey with humanitarian experts; pilot-tested the scale in Gaza, Jordan, Sudan, and the United Kingdom; and field-tested it in Haiti, Jordan, and Nepal.

Results. During field-testing, intraclass correlation coefficients (absolute agreement) for the total number of unmet needs were 0.998 in Jordan, 0.986 in Haiti, and 0.995 in Nepal (interrater reliability), and 0.961 in Jordan and 0.773 in Nepal (test–retest reliability). Cohen's κ for the 26 individual HESPER items ranged between 0.66 and 1.0 (interrater reliability) and between 0.07 and 1.0 (test–retest reliability) across sites. Most HESPER items correlated as predicted with related questions of the World Health Organization Quality of Life-100 (WHOQOL-100), and participants found items comprehensive and relevant, suggesting criterion (concurrent) validity and content validity.

Conclusions. The HESPER Scale rapidly provides valid and reliable population-based data on perceived needs in humanitarian settings. (*Am J Public Health.* 2012;102:e55–e63. doi:10.2105/AJPH.2012.300720)

Needs assessments in humanitarian settings (i.e., places in which a large part of the population is at risk of dying or experiencing immense suffering) are vital in enabling effective and efficient emergency relief. However, current needs assessments are often far from ideal; indeed, in 2009, heads of 26 large humanitarian donor agencies signed a letter to the United Nations asking for an improvement in the area of needs assessment (J. Isbister, G. Weinberger, J.-P. Loir, et al., unpublished letter, 2009).

There have also been repeated recommendations for increased participation of affected populations in humanitarian assessment.[1–6] People's participation in assessment is seen as a right and as essential for optimizing resource allocation, program design, and population empowerment.[6] It increases the likelihood that interventions are based on needs as expressed by the affected population. The international humanitarian community's focus on participation is exemplified by the fact that the recently revised, influential *Sphere Handbook* ([5,6]) on standards for humanitarian aid emphasizes the involvement of affected people.

Participation is recommended throughout the assessment, design, monitoring, and evaluation program cycle.[1,3–5] Additionally, in a recent ranking exercise for research priorities in the area of mental health and psychosocial support, 3 of the 10 most highly prioritized research questions in humanitarian settings included the participation of affected populations; the identification of affected populations' stressors was ranked as top priority.[7] Related to this is the notion of accountability within the international humanitarian response, including that humanitarian action should be accountable to affected populations.[4]

Within this framework of increased participation and accountability, it has been recommended that the assessment of perceived needs be used to inform project design, monitoring, and evaluation,[1–5,8,9] and perceived needs are considered a key determinant of psychosocial well-being.[1,8,10] Perceived needs are defined here as needs expressed by members of the affected population themselves. They are thus problem areas for which people would likely want help. In the humanitarian field, perceived needs are still assessed mostly through rapid participatory assessments in the early phase of a crisis; these assessments tend to involve gaining qualitative data from selected stakeholders through focus groups or key respondent interviews.[11] Although certainly valuable, such assessments cannot provide a population-level picture. Most population-based quantitative assessments are of "objective" indicators, such as mortality rates, malnutrition rates, or livelihood data.[12–14] These indicators are often defined by outsiders (i.e., nonmembers of the affected population) and do not quantify the prevalence and distribution of needs as perceived by members of the population themselves.

With a few exceptions,[15–17] assessment tools in the humanitarian field tend to have unknown psychometric properties (i.e., indices of validity and reliability). Without published psychometric properties, it is unknown to what extent assessment tools are fit for purpose.

To address these gaps, we developed a method and instrument to rapidly and quantitatively assess perceived needs in emergency-affected populations—the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale.[18] We describe the development and psychometric properties of the scale.

OVERVIEW OF HESPER SCALE

The HESPER Scale assesses the perceived physical, social, and psychological needs of the general adult population in humanitarian settings during conflict or other disasters in low- and middle-income countries. Perceived needs are assessed on the HESPER Scale across 26 need items, which each includes a short item heading, as well as an accompanying question. Examples of need items include "Place to Live In" ("Do you have a serious problem because you do not have an adequate place to live in?") and "Education for Your Children" ("Do you have a serious problem because your children are not in school or are not getting a good enough education?"). Ratings are then made for each need item according to unmet need (or serious problem; "1" rating), no need (or no serious problem; "0" rating), or no answer (i.e., refused, not known, or not applicable; "9" rating). From among the items that participants have rated as unmet needs, they are asked to rank their 3 most serious problems (hereafter referred to as priority ratings). This may enable prioritization of needs and emergency relief to those areas where it is perceived to be needed most. Participants are also asked to name any additional unmet needs not already listed. A total score of unmet needs can be calculated by adding up the number of items rated as serious problems.

The HESPER Scale was modeled on a mental health instrument, the Camberwell Assessment of Need Short Appraisal Schedule (CANSAS),[19] which has well-established reliability and validity.[20,21] The CANSAS has been modified successfully for numerous populations[22–25] and adapted for use in several countries.[26] It has been used on a wide range of populations, including asylum seekers and refugees in the United Kingdom[27,28] and torture victims in centers of the International Rehabilitation Council for Torture Victims in several countries.

METHODS

We developed the HESPER Scale over 3 phases (Figure 1):

- Phase 1 (2008): development of a draft scale through a process of item generation and item reduction, based first on a literature review and second on a survey with humanitarian experts.
- Phase 2 (2009): pilot-testing of the draft scale—in Jordan with displaced Iraqi people, in Gaza and Sudan with the general adult population, and in the United Kingdom with refugees from the Democratic Republic of the Congo—to assess the scale's feasibility, intelligibility, and cultural applicability, and to establish the suitability of training materials.
- Phase 3 (2010): field-testing of the revised draft scale—in Jordan with displaced Iraqi people, in Haiti with people living in post-earthquake displacement camps, and in Nepal with Bhutanese refugees—to assess its psychometric properties (i.e., validity and reliability).

Procedure

A steering committee and advisory group composed of international experts guided the development of the HESPER Scale.

Phase 1—development of draft scale. We developed the first draft scale[29] through a process of item generation and item reduction. We generated an item pool of 38 items by extracting items from gray and peer-reviewed literature directly documenting emergency-affected people's views of perceived needs, such as previous humanitarian needs assessments, existing assessment reports of nongovernmental organizations, and published journal articles on perceived needs (B. Poudyal, T. Erni, A. Jonathan, et al., unpublished data, 2007; S. B. Thapa and E. Hauff, unpublished data, 2007).[8,30–38] We included only items that were mentioned at least twice in any of these sources.

We then selected and reduced need items into the draft scale on the basis of a survey with a wide range of purposively sampled general and psychosocial humanitarian experts across the world (24 men and 19 women), as well as 6 national aid workers in Sierra Leone. The survey included both quantitative and qualitative responses; participants rated the need items that had been compiled during the item generation stage on an 11-point scale (0–10) of importance for inclusion into the scale, and suggested additional perceived need items that they considered important for inclusion. In addition, participants were encouraged to provide any further comments or feedback.[29] We drafted training materials to accompany the scale.

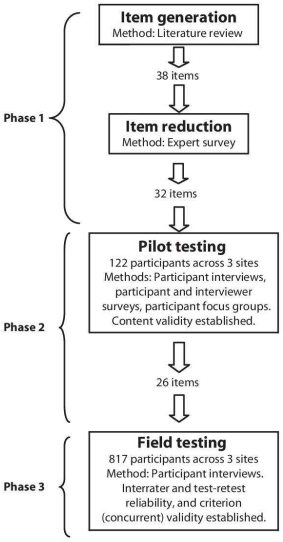

FIGURE 1—Development of the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale over 3 phases.

Phase 2—pilot-testing. We then pilot-tested the draft HESPER Scale in 3 relevant settings, after pretesting it in the United Kingdom with 7 refugees from Democratic Republic of the Congo who had been resettled from refugee camps in Zambia. Pilot-testing was a learning exercise to understand the scale's feasibility, intelligibility, and cultural applicability,[39] as well as assessing methodologies for subsequent field-testing.

We employed convenience sampling to recruit participants in the 3 pilot sites, with interviewers identifying and selecting participants. The following were interviewed: 40 Iraqis displaced following the 2003 invasion of Iraq (interviewed in Amman, Jordan in June 2009), 40 members of the local population in Gaza City (October 2009), and 42 members of the local population in Juba, Sudan (December 2009). All participants were at least 18 years old.

Interviews were conducted in participants' homes in one-to-one assessments; between 4 and 7 local interviewers (of whom 53.3% were women and 46.7% men) conducted interviews in the local Arabic dialect at each of the 3 pilot sites. We previously trained interviewers for 1 to 1½ days in administering the HESPER Scale. Interviewers administered the draft HESPER Scale to participants, as well as a survey in which participants were asked about any missing items and the intelligibility of the draft scale. For a subsample (20 each in Jordan and Gaza and 18 in Sudan), a second interviewer acted as silent rater to assess interrater reliability. Interviewers also invited participants to take part in a focus group discussion, in which participants reported on the intelligibility, (cultural) acceptability, relevance, and comprehensiveness of the scale's items, as well as the suitability of the content and concepts. We conducted 4 focus groups (2 for men, 2 for women) in each of the 3 pilot sites; 15 participants chose to take part in Jordan, 33 in Gaza, and 12 in Sudan. Interviewers completed an interviewer survey, in which they provided feedback on the intelligibility of the HESPER Scale and training materials, and on whether they experienced any difficulties in conducting the interviews.

Phase 3—field-testing. We then field-tested the revised HESPER Scale with larger samples in 3 relevant humanitarian settings to assess its psychometric properties and to estimate the level of perceived needs in these settings (here we focus on the scale's psychometric properties only). In total, 269 Iraqi participants displaced following the 2003 invasion of Iraq were interviewed in Jordan (Amman, Zarqa, Irbid, and Madaba) in July 2010, 279 people living in displacement camps following the January 2010 earthquake were interviewed in Haiti (Champs de Mars and Bolosse camps in Port-au-Prince and Pinchinat camp in Jacmel) in September 2010, and 269 Bhutanese refugees were interviewed in Nepal (Beldangi-II camp in Jhapa district) in October and November 2010.

Project materials were translated by back-translation methods before field-testing commenced; a bilingual translator first translated materials into the local language, another translator then translated the materials back into English, and the 2 versions were compared to identify and resolve any mistakes in the translation.[40]

To determine sample sizes for field-testing of the psychometric properties of the scale, we performed a calculation for test–retest reliability on the basis of previous psychometric testing of the different CANSAS versions. This showed the required minimum sample size for test–retest reliability to be 69 per site to give power $(1 - \beta)$ of 0.8, using a P value of .05, a minimum acceptable level of test–retest reliability (intraclass correlation coefficient) of 0.6, and a predicted test–retest reliability (intraclass correlation coefficient) of 0.7.[41] This sample size also allowed the detection of correlations for criterion (concurrent) validity of at least $r = 0.3$ with power $(1 - \beta)$ of 99%, or $r = 0.2$ with power $(1 - \beta)$ of 83%. Furthermore, we performed a calculation for interrater reliability on the basis of findings made during previous pilot-testing of the HESPER Scale. This showed the required minimum sample size for interrater reliability to be 39 per site in order to give power of 0.8, using a P value of .05, a minimum acceptable level of interrater reliability of 0.7, and a predicted interrater reliability of 0.8.[41]

We employed different sampling methods in the 3 sites according to what was appropriate and feasible. Iraqi participants in Jordan were recruited through a multistage cluster sampling design, involving 30 clusters of city districts. The sample was geographically representative of Iraqis living in Jordan, with around 75% of the sample in Amman (23 clusters) and around 25% (7 clusters) in other governorates (4 in Zarqa, 2 in Irbid, and 1 in Madaba). In Haiti, we purposively selected 3 displacement camps as study sites to fit in with the implementing agency's programs. Within camps, we selected participants by using a 2-stage systematic random sampling method, the first stage being households and the second stage being individuals within households. Both in Jordan and Haiti, we employed random-walk methods to recruit households within clusters or camps; we then randomly selected individuals within chosen households by using a random-number Kish Table.[42] In Nepal, we employed simple random sampling methods to recruit participants; we obtained a list of randomly selected Bhutanese refugees living in Beldangi-II camp from the Office of the United Nations High Commissioner for Refugees.

In each setting, between 6 and 12 local interviewers (57.7% were men and 42.3% were women) conducted interviews in one-to-one assessments in participants' homes (in Arabic in Jordan, Haitian Creole in Haiti, and Nepali in Nepal); the interviewers had previously been trained for 2 days (including a half-day pilot) in administering the HESPER Scale. Interviewers were recruited by the local collaborating organizations following an interview process, and were supervised by a local team leader. To measure the HESPER Scale's interrater reliability, a second interviewer acted as silent rater for 46 participants in Jordan, 44 in Haiti, and 42 in Nepal. To assess test–retest reliability of the scale, 70 and 73 participants in Jordan and Nepal, respectively, were interviewed a second time 1 week after the first interview by the same interviewer who had interviewed them before. We did not assess test–retest reliability in Haiti as it was considered too burdensome for local people in this intense humanitarian setting. We established criterion (concurrent) validity of the HESPER Scale by comparing 15 of its 26 individual need items, as well as the total number of unmet needs, to similar questions of an established quality-of-life instrument, the World Health Organization Quality of Life-100 (WHOQOL-100)[43] (77 participants in Jordan, 79 in Haiti, and 269 in Nepal). For the remaining 11 HESPER items, there was no comparable external criterion available.

Analyses

We performed data analyses with SPSS version 15.0 (SPSS Inc, Chicago, IL). We carried out counts and prevalence rates for categorical demographic variables. We calculated means and standard deviations for continuous demographic variables, time taken to administer the HESPER Scale, time between interviews 1 and 2 (retest), and the number of consistent priority ratings given across raters and time points. We calculated intraclass correlation coefficients (absolute agreement) to assess interrater reliability and test–retest reliability of total number of unmet needs on the HESPER Scale. We calculated percentage agreement and Cohen's κ values to assess interrater and test–retest reliability of

individual HESPER items[44]; we combined "0" ("no serious problem") and "9" ("not applicable") ratings into 1 rating for this. Measuring the psychometric properties of individual HESPER items was important, as in humanitarian settings individual item scores are arguably more useful as indicators of perceived needs that can be addressed by aid agencies than the score of the total number of unmet needs.

For criterion (concurrent) validity, we calculated the Pearson's correlation coefficient to measure the association between total number of unmet needs and total WHOQOL-100 score, and point-biserial correlation coefficients for associations between individual HESPER items and selected questions from the WHOQOL-100. We made predictions for correlation coefficients prior to field-testing, and compared results with these.

RESULTS

We report results separately for the 3 developmental phases of the HESPER Scale.

Phase 1—Development of Draft Scale

The 49 expert survey participants rated all HESPER items as at least moderately important, with means of between 4.88 (SD = 3.27) and 9.39 (SD = 1.15) on a scale of 0 to 10. We therefore took a broad approach in the selection of items into the draft scale for pilot-testing, with the revision of items primarily involving their rephrasing and regrouping. On the basis of participants' suggestions, we added 1 item ("Health Care") and also a section to record priority ratings. Overall, we reduced the first draft scale from 38 to 32 items for pilot-testing on the basis of the expert survey.

Furthermore, we conflated the "No Need" and "Met Need" categories of the CANSAS into a single "No Need" (or "No Serious Problem") category in the draft HESPER Scale. We did this because empirical evidence about moderators[45,46] and mediators[47,48] of need indicated that unmet need was most predictive, and also to ease use of the scale in the field.

Phase 2—Pilot-Testing

Cohen's κ values for interrater reliability of the 32 individual HESPER items included during pilot-testing ranged between 0.62 and 1.0 in Jordan, 0.77 and 1.0 in Gaza, and 0.85 and 1.0 in Sudan. Intraclass correlation coefficients (absolute agreement) for total number of unmet needs were 0.951 in Jordan, 0.998 in Gaza, and 0.998 in Sudan. All items were rated as a serious problem by at least 1 participant in each of the 3 pilot sites. During the participant and interviewer surveys as well as the participant focus group discussions, participants and interviewers indicated that the list of HESPER items was intelligible, comprehensive, culturally acceptable, and useful overall (although suggestions were made for further minor improvements). This established the content validity of the scale.

On the basis of suggested revisions by participants and interviewers during pilot-testing, and on advice from members of the project's advisory group, we reduced the scale further from 32 to 26 items, primarily by combining closely related items. We reworded parts of the scale to make it more intelligible and restructured it in terms of the order of its items (with basic physical survival needs listed first and items covering community issues last). We also made revisions to training materials.

Phase 3—Field-Testing

Respondents. Participants' characteristics at field-testing sites are displayed in Table 1. Response rates of people invited to participate were 55.1% in Jordan, 95.0% in Haiti, and 80.0% in Nepal; the response rate across sites was 73.1%. As expected, response rates were relatively low in Jordan, as displaced Iraqi people had previously been exposed to a multitude of surveys and also displayed high levels of fear.

Time to complete. Data collection (330–385 interviews per country) took between 12 and 22 working days (using 12 and 6 interviewers, respectively) in each of the field sites, including time spent on training interviewers.

On average, the HESPER Scale took 14.8 (SD = 4.1) minutes to complete in Jordan, 21.3 (SD = 11.5) minutes in Haiti, and 22.0 (SD = 6.0) minutes in Nepal; across sites, the mean was 19.5 minutes (SD = 8.7).

Interrater reliability. Intraclass correlation coefficients (absolute agreement) for interrater reliability of total number of unmet needs were 0.998 in Jordan, 0.986 in Haiti, and 0.995 in Nepal; across sites it was 0.998. Percentage agreements for interrater reliability of need ratings of individual HESPER items ranged between 95.3% and 100%, and Cohen's κ ranged between 0.66 and 1.0 across the 3 field-testing sites (Table 2).

The mean number of priority ratings that raters agreed on was 3.0 (SD = 0) in Jordan, 3.0 (SD = 0) in Haiti, and 2.95 (SD = 0.22) in Nepal; across sites it was 2.98 (SD = 0.12) (out of 3.0).

Test–retest reliability. Retest interviews were conducted between 6 and 8 days following the first interview in Jordan, and between 5 and 8 days later in Nepal; the means were 6.9 days (SD = 0.3) and 6.5 days (SD = 0.8), respectively.

Intraclass correlation coefficients (absolute agreement) for test–retest reliability of total number of unmet needs were 0.961 in Jordan and 0.773 in Nepal; across the 2 sites it was 0.907. Percentage agreements for test–retest reliability of need ratings of individual HESPER items ranged between 66.7% and 100%, and Cohen's κ ranged between 0.07 and 1.0 across the 2 sites (Table 3).

The mean number of priority ratings that were consistently given at the 2 time points were 2.4 (SD = 0.71) in Jordan and 1.33 (SD = 0.79) in Nepal; across the 2 sites, the mean was 1.86 (SD = 0.92; out of 3.0).

As test-retest reliability results in Nepal were lower overall than all other reliability results across the 3 field sites, brief interviews were conducted with 12 participants following retest interviews in Nepal, where they were asked for reasons why they may have responded differently at interviews 1 and 2. Reasons given included the following:

- They believed the collaborating agency would be more likely to offer them support if they mentioned a wide range of different problems during the 2 interviews (n = 7).
- They had been experiencing some tensions in one of the interviews, for instance because family members had been resettled (n = 5).
- They were old or had low levels of understanding or listening skills (n = 3).
- Discussions with family members following the first interview led them to respond differently during the second interview (n = 3).

TABLE 1—Demographic Characteristics of Study Participants at the 3 Field-Testing Sites for the Humanitarian Emergency Settings Perceived Needs (HESPER) Scale: 2010

Characteristic	Total (n = 817), No. (%) or Mean (SD)	Jordan (n = 269), No. (%) or Mean (SD)	Haiti (n = 279), No. (%) or Mean (SD)	Nepal (n = 269), No. (%) or Mean (SD)
Gender				
Male	305 (37.3)	116 (43.1)	50 (17.9)	139 (51.7)
Female	512 (62.7)	153 (56.9)	229 (82.1)	130 (48.3)
Age, y	37.09 ±13.5	40.24 ±13.36	34.22 ±12.31	36.92 ±14.15
Marital status				
Married	441 (54.0)	191 (71.0)	33 (12.0)	217 (80.7)
Unmarried	335 (41.0)	56 (20.8)	229 (82.1)	50 (18.6)
Widowed	18 (2.2)	16 (5.9)	2 (0.7)	0
Divorced or separated	8 (1.0)	6 (2.2)	0	2 (0.7)
Cohabiting	11 (1.3)	0	11 (4.0)	0
No. of children	2.37 ±2.17	2.11 ±1.95	2.59 ±2.14	2.39 ±2.37
Level of education				
Illiterate or no formal education	164 (20.1)	7 (2.6)	49 (17.7)	108 (40.1)
Primary school (grades 1-6)	190 (23.3)	29 (10.8)	98 (35.4)	63 (23.4)
Secondary school (grades 7-12)	315 (38.6)	104 (38.7)	122 (44.0)	89 (33.1)
University	146 (17.9)	129 (48.0)	8 (2.9)	9 (3.3)
Religion				
Christian	329 (40.3)	45 (16.7)	268 (96.1)	16 (5.9)
Muslim	221 (27.1)	221 (82.2)	0	0
Hindu	178 (21.8)	0	0	178 (66.2)
Buddhist	52 (6.4)	0	0	52 (19.3)
Other religion[a]	27 (3.3)	3 (1.1)	1 (0.4)	23 (8.6)
No religion	5 (0.6)	0	5 (1.8)	0
Time displaced, y	7.77 ±8.09	3.84 ±2.18	0.67 ±0.06	18.95 ±0.93

Note. Numbers do not always add up to total score because of missing data.
[a]Other religions include Kirat, Sanatan, Biswasi, Manab, Nastak (Nepal), Haba'i, Sa'aebiya (Jordan), and Voodoo (Haiti).

Criterion (concurrent) validity. Total number of unmet needs on the HESPER Scale correlated with the total WHOQOL-100 score as was predicted before data collection (i.e., Pearson's correlation was within 1 order-of-magnitude step of the predicted value, where 0.1–0.3 represented a low correlation, 0.3–0.5 represented a medium correlation, and 0.5–1.0 represented a high correlation) in all 3 settings ($r = -0.629$ in Jordan, -0.417 in Haiti, and -0.469 in Nepal), as well as with the WHOQOL-100 question "How would you rate your quality of life?" ($r = -0.501$ in Jordan, -0.302 in Haiti, and -0.286 in Nepal).

Point-biserial correlations between 15 of the 26 individual HESPER items and 25 related WHOQOL-100 questions were also mostly as was predicted before data collection in all 3 field sites, apart from the item "Income or Livelihood" in Haiti ($r = 0.033$ and 0.242 for 2 related WHOQOL-100 questions, where negative low to medium and negative low correlations had been predicted, respectively), the item "Distress" in Haiti ($r = 0.06$ and 0.078, where negative low and positive medium correlations had been predicted, respectively), the item "The Way Aid Is Provided" in Nepal ($r = 0.015$, where a negative low correlation had been predicted), and the item "Safety or Protection From Violence for Women in Your Community" in Nepal ($r = 0.045$, where a negative low correlation had been predicted). In Haiti, however, validation for the 2 items was compromised, as the items were rated as serious problems by over 90% of participants (i.e., limited variability and power).

Finalization of HESPER Scale. We made minor changes in the wording of 8 items to finalize the HESPER Scale following field-testing; for example, the item heading "Aid" was rephrased as "The Way Aid Is Provided," and for the item "Clothing, Shoes, Bedding or Blankets" the word "Clothing" was replaced with "Clothes."

DISCUSSION

The HESPER Scale proved to be a valuable and comprehensive tool, with adequate psychometric properties across different population groups in a variety of humanitarian settings. Interrater and test–retest reliability results were good to very good overall. International experts, as well as interviewers and participants in several pilot sites, found

TABLE 2—Percentage Agreement and Cohen's κ for Interrater Reliability of Need Ratings of Individual Humanitarian Emergency Settings Perceived Needs (HESPER) Scale Items

HESPER Items	Total (n = 132), Cohen's κ (% Agreement)	Jordan[a] (n = 46), Cohen's κ (% Agreement)	Haiti[b] (n = 44), Cohen's κ (% Agreement)	Nepal (n = 42), Cohen's κ (% Agreement)
Drinking water	0.98 (99.2)	1.0 (100)	0.94 (97.7)	1.0 (100)
Food	0.97 (98.5)	0.94 (97.8)	0.79 (97.7)	1.0 (100)
Place to live in	0.98 (99.2)	0.96 (97.8)	(100)[c]	1.0 (100)
Toilets	0.95 (97.7)	0.94 (97.8)	0.89 (95.3)	1.0 (100)
Keeping clean	0.99 (99.2)	1.0 (100)	1.0 (100)	0.95 (97.6)
Clothing, shoes, bedding, or blankets	0.98 (99.2)	1.0 (100)	1.0 (100)	0.95 (97.6)
Income or livelihood	1.0 (100)	1.0 (100)	1.0 (100)	1.0 (100)
Physical health	0.97 (98.5)	1.0 (100)	0.95 (97.7)	0.95 (97.6)
Health care	0.95 (97.7)	0.96 (97.8)	0.88 (95.5)	1.0 (100)
Distress	1.0 (100)	1.0 (100)	1.0 (100)	1.0 (100)
Safety	1.0 (100)	1.0 (100)	1.0 (100)	1.0 (100)
Education for your children	0.97 (98.5)	0.91 (97.8)	0.94 (97.7)	1.0 (100)
Care for family members	0.94 (97.0)	0.9 (95.7)	(95.5)[c]	1.0 (100)
Support from others	1.0 (100)	1.0 (100)	1.0 (100)	1.0 (100)
Separation from family members	1.0 (100)	1.0 (100)	1.0 (100)	1.0 (100)
Being displaced from home	1.0 (100)	1.0 (100)	1.0 (100)	1.0 (100)
Information	0.97 (98.5)	1.0 (100)	0.66 (97.7)	0.93 (97.6)
Aid	0.98 (99.2)	0.95 (97.8)	1.0 (100)	1.0 (100)
Respect	0.98 (99.2)	0.9 (97.8)	1.0 (100)	1.0 (100)
Moving between places	0.95 (97.7)	0.95 (97.8)	0.89 (95.5)	1.0 (100)
Too much free time	0.98 (99.2)	1.0 (100)	1.0 (100)	0.94 (97.6)
Law and justice in your community	0.99 (99.2)	1.0 (100)	0.92 (97.7)	1.0 (100)
Safety or protection from violence for women in your community	0.95 (97.7)	0.9 (97.8)	0.89 (95.5)	1.0 (100)
Alcohol or drug use in your community	0.98 (99.2)	1.0 (100)	0.94 (97.7)	1.0 (100)
Mental illness in your community	0.97 (98.5)	1.0 (100)	0.91 (95.5)	1.0 (100)
Care for people in your community who are on their own	1.0 (100)	1.0 (100)	1.0 (100)	1.0 (100)

Note. "0" ("No Serious Problem") and "9" ("Not Applicable") ratings have been combined.
[a]In Jordan, an additional item, "Residency or Resettlement," was added on the basis of findings made during pilot-testing (percentage agreement = 100, Cohen's κ = 1.0).
[b]In Haiti, an additional item, "Burying and mourning the dead in your community," was added on the basis of field observations (percentage agreement = 97.7, Cohen's κ = 0.94).
[c]Not possible to compute Cohen's κ, as ratings for at least 1 of the variables was a constant.

the list of HESPER items to be comprehensive and relevant, providing evidence for content validity of the scale. Furthermore, most HESPER items correlated with related questions of the WHOQOL-100 as was predicted before data collection, suggesting criterion validity.

Limitations

Because of issues of feasibility, there were some limitations in the way the HESPER Scale's psychometric properties were measured. In particular, the method of having a second interviewer silently rate the HESPER Scale to assess interrater reliability may overestimate interrater reliability, as responses may be affected by the personal characteristics and manner of interviewers. Moreover, although the WHOQOL has been widely used and validated worldwide,[49] it had not been validated in the populations in which the HESPER Scale was field-tested, thereby reducing the strength of the assessed validity.

Whereas interrater reliability across the 3 field-testing sites and test–retest reliability in Jordan was excellent, test–retest reliability in Nepal was substantially lower. Ten of 12 participants in Nepal who were asked to provide an explanation for this indicated that they made some deliberate effort to respond differently during the 2 interviews. This suggests reduced validity of the retest results in Nepal, as it may be a reflection of affected populations' conscious attempts to influence humanitarian response (for instance, by overestimating the seriousness of their needs).[50] Although the psychometric results so far are very promising, these issues highlight the need for more work to be conducted across different settings, to provide further evidence for reliability and validity of the HESPER Scale. It may be useful for this to include an assessment of construct validity and internal consistency of the scale, in particular when working with total scores of unmet need. Furthermore, factor or principal component analyses may be valuable in identifying underlying structures of associated HESPER items.

TABLE 3—Percentage Agreement and Cohen's κ for Test–Retest Reliability of Need Ratings of Individual Humanitarian Emergency Settings Perceived Needs (HESPER) Scale Items

HESPER Items	Total (n = 122), Cohen's κ (% Agreement)	Jordan[a] (n = 59), Cohen's κ (% Agreement)	Nepal (n = 63), Cohen's κ (% Agreement)
Drinking water	0.82 (91.7)	0.89 (94.9)	0.17 (88.7)
Food	0.66 (82.8)	0.9 (94.9)	0.43 (71.4)
Place to live in	0.66 (82.8)	0.86 (93.2)	0.43 (73.0)
Toilets	0.63 (85.2)	0.88 (94.9)	0.39 (76.2)
Keeping clean	0.64 (84.4)	0.73 (88.1)	0.55 (81.0)
Clothing, shoes, bedding or blankets	0.67 (83.6)	0.93 (96.6)	0.43 (71.4)
Income or livelihood	0.73 (91.8)	1.0 (100)	0.6 (84.1)
Physical health	0.6 (80.2)	0.77 (89.8)	0.38 (71.0)
Health care	0.75 (87.7)	0.8 (91.5)	0.49 (84.1)
Distress	0.7 (85.2)	0.81 (94.9)	0.39 (76.2)
Safety	0.56 (85.2)	0.71 (89.8)	0.42 (81.0)
Education for your children	0.71 (93.4)	0.88 (96.6)	0.46 (90.5)
Care for family members	0.69 (86.0)	0.89 (94.9)	0.45 (77.4)
Support from others	0.85 (93.4)	0.86 (93.2)	0.47 (93.7)
Separation from family members	0.68 (85.2)	0.86 (96.6)	0.49 (74.6)
Being displaced from home	0.65 (86.8)	1.0 (100)	0.48 (74.2)
Information	0.52 (79.5)	0.69 (84.7)	0.07 (74.6)
Aid	0.75 (87.7)	0.84 (94.9)	0.38 (81.0)
Respect	0.76 (91.8)	0.84 (93.2)	0.61 (90.5)
Moving between places	0.64 (85.2)	0.85 (93.2)	0.39 (77.8)
Too much free time	0.59 (79.5)	0.86 (93.2)	0.26 (66.7)
Law and justice in your community	0.55 (82.0)	0.66 (86.4)	0.46 (77.8)
Safety or protection from violence for women in your community	0.62 (87.7)	0.77 (94.9)	0.52 (81.0)
Alcohol or drug use in your community	0.67 (88.5)	0.79 (98.3)	0.57 (79.4)
Mental illness in your community	0.79 (90.2)	0.83 (91.5)	0.65 (88.9)
Care for people in your community who are on their own	0.64 (82.8)	0.76 (88.1)	0.51 (77.8)

Note. Participants with a change in their condition were excluded from the analyses. "0" ("No Serious Problem") and "9" ("Not Applicable") ratings have been combined. Test–retest reliability was not measured in Haiti, as it was not considered appropriate in this setting.
[a]In Jordan, an additional item, "Residency or Resettlement," was added on the basis of findings made during pilot-testing (percentage agreement = 96.6, Cohen's κ = 0.92).

Sampling methods were often challenging. In particular, as there was no complete list of households or individuals available in Jordan and Haiti during field-testing, random-walk methods had to be employed. Furthermore, the response rate in Jordan was relatively low. The findings may therefore not be representative of the affected populations at large in the 3 settings. However, the effect of such biases on psychometric estimates is likely to be minimal, as the focus is more on substantive responses than on the representativeness of participants.

Implications

The HESPER Scale enables the perceived problems of people living in humanitarian situations to be assessed quickly and reliably, directly on the basis of their own views. The scale has been found to be applicable and useful in several diverse humanitarian settings, and is available in English, French, Spanish, Arabic, Nepali, and Haitian Creole. So far, the HESPER Scale has been tested only in adult populations.

However, use of the HESPER Scale at one time point is not sufficient to understand the complexities of population needs. Needs assessments should be viewed and contextualized within the specific timeframe within which they are conducted; for this purpose, it may be that the HESPER Scale can be used repeatedly over time to identify shifts and trends in perceived needs and to assess whether needs are being addressed adequately over time. To assess this possibility, it would be useful for future research to measure the scale's sensitivity to change, something that was beyond the scope of the current study.

Moreover, the HESPER Scale on its own may not be sufficient to fully understand people's perceived needs, nor will it directly indicate what is required to respond to these needs. HESPER surveys can be followed up with in-depth key informant interviews to better understand the specifics of why—from the participants' perspectives—needs are rated as they are. There is a continued need for traditional surveillance and early warning

systems to identify needs. The HESPER Scale is not able to function as an operational tool to give detailed feedback on the quality of interventions within sectors. However, in situations where interventions have started to respond to needs and affected populations still indicate that a particular issue ranks high as need, the HESPER Scale may give a strong indication that the response does not yet meet these needs.

Conclusions

The development of the HESPER Scale opens up new avenues in the science of humanitarian needs assessment by (1) enabling rapid representative mapping and ranking of perceived needs as expressed by affected populations (allowing for differentiation of perceived needs between different population subgroups) and (2) showing that not just psychopathology[15] but also the broad spectrum of humanitarian needs can be assessed with documented reliability and validity. It offers a method to produce information that can be directly used to prioritize and guide specific forms of emergency relief and to assess the impact of their implementation. This type of assessment allows affected populations to express what they consider to be their needs. The HESPER Scale thereby fills a gap within the multisectoral needs assessment field, allowing comparisons to be made between the views of international aid agencies and affected populations of what is needed, and therefore facilitating priorities for the most appropriate humanitarian response to be set. ■

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This article was accepted January 30, 2012.

Note. *The views expressed in this report are those of the authors only and do not necessarily represent the decisions, policies, or views of their employers.*

Contributors

M. van Ommeren and G. Thornicroft jointly conceptualized development of the HESPER Scale. M. Semrau and M. van Ommeren led the HESPER project. M. Semrau conducted each of the 7 pilot and field studies in close consultation with M. van Ommeren, performed the data analyses, and led the writing of the article; M. van Ommeren provided technical advice and detailed input throughout. G. Thornicroft and L. M. Howard supervised M. Semrau and gave technical advice. H. Lempp and A. Griekspoor are members of the HESPER steering committee. M. Slade informed the design of the HESPER Scale. J. Pedersen and M. Jordans facilitated data collection in Gaza and Nepal, respectively. I. Pilotte, A. Marini, and M. Blagescu coordinated data collection in Haiti, Jordan, and Sudan, respectively. All authors contributed to the writing of the article, and have seen and approved the final version.

Acknowledgments

Maya Semrau is funded by a PhD studentship grant of the Medical Research Council (UK). Graham Thornicroft is funded by a NIHR Applied Programme grant awarded to the South London and Maudsley NHS Foundation Trust, and is affiliated with the NIHR Specialist Mental Health Biomedical Research Centre at the Institute of Psychiatry, King's College London and the South London and Maudsley NHS Foundation Trust. Louise M. Howard is supported by an NIHR Programme Grant for Applied Research (RP-PG-0108-10084) and by the NIHR Specialist Mental Health Biomedical Research Centre at the Institute of Psychiatry, King's College London, and the South London and Maudsley NHS Foundation Trust. Heidi Lempp receives half of her salary from Guy's and St. Thomas' Charity, London.

The development of the HESPER Scale was a collaborative project between the Department of Mental Health and Substance Abuse at WHO and the Institute of Psychiatry at King's College London. The steering group of the HESPER project included Mark van Ommeren and Andre Griekspoor at WHO Geneva and Graham Thornicroft, Louise M. Howard, Heidi Lempp, Morven Leese, and Maya Semrau at King's College London.

The HESPER international advisory group consisted of Paul Bolton (John Hopkins Bloomberg School of Public Health), Kaz de Jong (Medicins Sans Frontieres Amsterdam), Nadine Ezard (Monash University), Richard Garfield (Columbia University), Johan Heffinck (DG ECHO, European Commission), Lynne Jones (International Medical Corps), Helen McColl (International Rehabilitation Council for Torture Victims), Pau Pérez-Sales (Medicos del Mundo, MdM-E), Shekhar Saxena (WHO), Mike Slade (King's College London), Egbert Sondorp (London School of Hygiene and Tropical Medicine), Zachary Steel (University of New South Wales), Wietse Tol (HealthNet TPO, Yale University), and Mike Wessells (Columbia University, New York).

Data collection in Gaza was organized by Fafo Institute for Applied International Studies, with the WHO Office in Gaza providing advice and funding provided by WHO Geneva and Fafo. Data collection in Haiti was organized by International Medical Corps Haiti and was funded through a PhD studentship grant by the Medical Research Council (UK) to Maya Semrau. Data collection in Jordan was organized by WHO Jordan and was implemented by Accurate Opinion (field-testing) and the Market Research Organisation (pilot-testing); UNHCR provided advice on sampling. Data collection in Jordan was funded by the Jordanian Nursing Council, WHO Jordan, and the University of London Central Research Fund. Data collection in Nepal was organized by HealthNet TPO/TPO Nepal, with funding provided by WHO Geneva, and UNHCR Nepal and WHO Nepal providing further support. Data collection in Sudan was organized by Humanitarian Accountability Partnership (HAP) International. Data collection in the United Kingdom was facilitated by the British Refugee Council.

Note. The funding sources had no involvement in the design or execution of the study, nor in the data analyses or the decision to submit the article for publication.

Human Participant Protection

Ethics approval for the study was obtained through the King's College London Psychiatry, Nursing and Midwifery Research Ethics Committee. In Nepal, further ethical approval was obtained from the Nepal Health Research Council and in Jordan further permission for the study was obtained from the Ministry of Interior, Ministry of Planning, and Ministry of Health. Participants in all 3 phases gave their free written or verbal consent to take part.

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APPENDIX F2

Paper on 'Role of current perceived needs in explaining the association between past trauma exposure and distress in humanitarian settings in Jordan and Nepal'

BJPsych | The British Journal of Psychiatry
1–6. doi: 10.1192/bjp.bp.111.102137

Role of current perceived needs in explaining the association between past trauma exposure and distress in humanitarian settings in Jordan and Nepal

Mark J. D. Jordans,* Maya Semrau,* Graham Thornicroft** and Mark van Ommeren**

Background
Attention is increasingly shifting towards the role of daily stressors in explaining mental health outcomes in humanitarian emergencies.

Aims
To assess the role of current perceived needs in explaining the association between past traumatic exposure and distress in humanitarian settings.

Method
A series of mediator analyses were conducted, using data from Jordan (displaced Iraqi people) and Nepal (Bhutanese refugees). The General Health Questionnaire (GHQ-12), the newly developed Humanitarian Emergency Settings Perceived Needs Scale (HESPER) and the traumatic events list of the Composite International Diagnostic Interview (CIDI) were used as measures of distress, current perceived needs and past traumatic events respectively.

Results
Current perceived needs were found to mediate the association between past traumatic exposure and distress in Jordan and, less strongly, in Nepal.

Conclusions
An integrated approach that includes a focus on daily stressors should be adopted to mitigate the impact of traumatic exposure in humanitarian settings.

Declaration of Interest
None.

Populations affected by humanitarian emergencies such as those involving natural disasters, conflict or war are often exposed to a wide range of stressors, with elevated levels of distress and mental disorders commonly found in these settings.[1–5] Historically, there has been a heavy emphasis placed within relevant research and mental health interventions on potentially traumatic events experienced during the emergency (for instance exposure to violence, torture, forced recruitment to fight, loss of home or loved ones, etc.), and the effects these have on emergency-affected people's mental health. Post-traumatic stress disorder (PTSD) has featured most prominently as the mental health outcome indicator of choice in evaluation studies.[6–9] Recent reviews and other studies have confirmed that experience of torture, violence, conflict and other potentially traumatic events are strongly associated with mental disorders, such as PTSD and depression.[1,5,6]

In recent years, however, a debate has arisen over the relative value of trauma-focused perspectives in emergency settings. The World Health Organization (WHO) is one of several agencies which, along with others, have called for a refocusing of mental health interventions in humanitarian emergency settings towards a broader framework incorporating mental disorders such as PTSD.[1,2,9–11] An integrative 'mental health and psychosocial support' approach has been advocated in emergency settings, incorporating a range of social (non-clinical) programmes as well as mental health interventions (including trauma-focused ones).[2,3,10,12–14] The broader framework has a bearing on the assessment of needs in humanitarian settings, exemplified by the development of a new scale.

The development and initial validation of the Humanitarian Emergency Settings Perceived Needs Scale (HESPER) has been described in detail elsewhere.[15] In short, the HESPER Scale was developed by the WHO and the Institute of Psychiatry at King's College London, to rapidly assess perceived needs of populations in humanitarian settings during conflict or other disasters in low- and middle-income countries. The scale, uniquely, provides a population-level assessment of the prevalence and distribution of needs as perceived by members of the population themselves. In addition to providing descriptive data to inform and monitor humanitarian response, the scale can help answer the following policy question. To what extent do daily stressors (i.e. current needs) experienced in the post-emergency environment (for instance poverty, forced displacement to camps, overcrowding, malnutrition, etc.) account for the impact of traumatic exposure on mental health (for example Miller & Rasmussen,[12,16] Neuner,[17] Ager[18])? It is not clear how much of the variance in mental health outcome may be predicted by current needs or stressors in the potentially modifiable post-emergency recovery environment *v.* traumatic events that have already occurred previously. Recently, various models have been proposed that attempt to explain the interaction between these variables. One such model, proposed by Miller & Rasmussen[12,16] purports that daily stressors mediate the relationship between traumatic experiences and mental health in conflict and post-conflict settings. They argue that the direct traumatising effects of war exposure on affected populations' mental health are often overemphasised compared with the impact of daily stressors present in post-conflict environments, and advocate an integrative intervention approach, which addresses daily stressors first, and specialised trauma interventions next only for those individuals who are still very distressed. In strong contrast, another model has suggested that poor mental health (which may be caused or exacerbated by past traumatic experiences) may conversely result in a change in the perception of daily stressors, or even the self-generation of daily stressors.[17] This paper aims to further this discussion by assessing the

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relationship between current perceived needs, past traumatic events and distress in two humanitarian settings. Specifically, the role of perceived needs in explaining the association between traumatic exposure and distress is investigated.

Method

Sample

In Jordan, Iraqi people ($n=269$) displaced following the 2003 invasion of Iraq were interviewed in July 2010 (Amman, Zarqa, Irbid, and Madaba). In Nepal, Bhutanese refugees ($n=269$) were interviewed in October to November 2010 (Beldangi-II camp in Jhapa district).

Measures

Distress was used as dependent variable, as measured by the General Health Questionnaire (GHQ-12).[19] The main independent variables were perceived needs (as measured by the newly developed HESPER Scale)[20] and past traumatic events (as measured by the traumatic events list of the PTSD section of the Composite International Diagnostic Interview (CIDI) 3.0).[21]

The GHQ-12 provides a distress score based on 12 questions relating to symptoms of depression and anxiety.[19] An Arabic and Nepali version have been validated.[22,23] It has been used as a measure of distress in the World Mental Health Survey Initiative in 28 countries.[24] The traumatic events list of the CIDI lists 27 potentially traumatic events, several of which (though not all) directly relate to events common in conflict or other disastrous situations; a total score of traumatic exposure can then be computed by counting the number of events experienced. Participants are also able to list additional events experienced.[21] In the present study, Cronbach's alphas for internal consistency of the GHQ-12 were 0.89 in Jordan and 0.88 in Nepal; for the CIDI traumatic events list, the alphas were 0.71 in Jordan and 0.72 in Nepal.

The HESPER Scale assesses the perceived physical, social, and psychological needs of the general adult population in humanitarian settings. Perceived needs are defined here as needs expressed by members of the affected population themselves. They are thus problem areas for which people would likely want help. Perceived needs are assessed on the HESPER Scale across 26 need items. Examples of need items include 'Place to live in' ('Do you have a serious problem because you do not have an adequate place to live in?'), and 'Education for your children' ('Do you have a serious problem because your children are not in school or are not getting a good enough education?'). Ratings are then made for each need item according to unmet need (or serious problem; '1' rating), no need (or no serious problem; '0' rating), or no answer (i.e. refused, not known, or not applicable; '9' rating). A total score of unmet needs can be calculated by adding up the number of items rated as serious problems.

Validation of the HESPER Scale was conducted with the same data-sets as were used for the present study.[15] In brief, the HESPER Scale demonstrated excellent interrater reliability (intraclass correlation coefficients (ICCs, absolute agreement) for total number of unmet needs were 0.998 in Jordan and 0.995 in Nepal; Cohen's kappas for need ratings of the 26 individual need items ranged between 0.66 and 1.0 across sites, with 94.9% of items having kappas over 0.8), and good to excellent test–retest reliability (ICCs, absolute agreement, for total number of unmet needs were 0.961 in Jordan and 0.773 in Nepal; need ratings of individual need items ranged between 0.07 and 1.0, with 55.8% of items having kappas over 0.6). Additionally, acceptable criterion (concurrent) validity was established by comparison with the World Health Organization Quality of Life (WHOQOL-100);[25] total number of unmet needs correlated with total WHOQOL-100 score as predicted in both settings ($r=-0.629$ in Jordan and $r=-0.469$ in Nepal), and correlations between individual need items and related WHOQOL-100 questions were mostly as predicted.[15] Internal consistency was assessed by calculating Cronbach's alpha, where '0' ('no serious problem') and '9' ('not applicable') ratings were combined into one rating, as was done for the initial study into the psychometric properties of the HESPER Scale.[15] Cronbach's alphas of the HESPER Scale were 0.89 in Jordan and 0.80 in Nepal.

Procedure

Ethics approval for both settings was obtained through the King's College London Psychiatry, Nursing and Midwifery Research Ethics Committee. In Nepal, ethical approval was obtained from the Nepal Health Research Council, and in Jordan permission for the study was obtained from the Ministry of Planning and Ministry of Health. All participants gave their voluntary written or verbal consent to take part. Arabic and Nepali versions of the GHQ-12 and the traumatic events list of the CIDI were obtained from distributors or other research groups before testing commenced; all other project materials (including the HESPER Scale) were translated using back-translation methods. The traumatic events list of the CIDI was adapted to suit the local contexts, i.e. a few items were added or removed based on previous research of what items were locally relevant. In Jordan, an additional need item was added to the HESPER Scale based on previous findings made during pilot-testing. This item pertains to problems related to legal residency and potential resettlement to a third country.

Different sampling methods were employed in the two sites. Iraqi participants in Jordan were recruited through a multistage cluster sampling design, involving 30 clusters of city districts. The sample was geographically representative of Iraqis living in Jordan (around 75% of the sample lived in Amman and 25% outside Amman). In Jordan, the random-walk method was employed to recruit households within clusters or camps; a random-number Kish Table[26] was used to select individuals from within chosen households. In Nepal, participants were recruited though simple random sampling methods; a list of randomly selected Bhutanese refugees in the camp was obtained from the United Nation High Commissioner for Refugees.

Interviews were conducted during one-to-one assessments in participants' homes in Arabic in Jordan and Nepali in Nepal; these were conducted by 12 and 6 local interviewers respectively, who had previously been trained for 3.5 to 4 days. Interviewers were supervised by a local team leader. Participants were first administered the HESPER Scale, followed by the GHQ-12 and then the traumatic events list of the CIDI.

Statistical analyses

To identify the mechanism that underlies the relationship between trauma exposure and distress in humanitarian settings, a series of mediation analyses were conducted. A mediator model hypothesises that the effect of the independent variable on the dependent variable is transformed by the mediator variable.[27,28] The mediator variable thus clarifies the nature of the relationship between the independent and dependent variables and is the mechanism through which a predictor influences an outcome variable. Traditional approaches to mediator testing have been criticised, and alternative approaches have been developed to test direct *v.* indirect effects and using bootstrapping procedures.[29]

Direct effects refer to the relationship between a predictor variable (X) and outcome variable (Y). Indirect effects refer to the effect of (X) on (Y) via a mediator variable (M). Predictor variables may have both direct and indirect effects on an outcome variable. The hypothesised mediator between trauma exposure and distress in the current study was perceived needs. Therefore, both the direct effect of trauma exposure on distress and the indirect effect of trauma exposure on distress via perceived needs were examined.

A regression-based approach to mediation analysis was used with bootstrap estimation of indirect effects, with data being resampled 5000 times. Many mediation studies use regression analysis-based approaches.[30] Bootstrapping is a non-parametric technique for obtaining parameter estimates by numerous resamplings of the data, and is used for testing the likelihood of the mediation by producing robust confidence intervals for the estimates. A Preacher & Hayes' 'indirect' macro for SPSS was used in the present study, which calculates bootstrap estimates of indirect effect for models of one or more mediators[31] (see www.afhayes.com/spss-sas-and-mplus-macros-and-code.html for the macro). Simulation studies have shown that bootstrap estimation compares favourably with distribution-based estimation or significance tests for simple mediation models (i.e. one mediator).[32] A further strength of the 'indirect' macro is that it allows for the inclusion of covariates. In case the problem of confounding (of associations) is present, a model that does not control for the effect of the confounding variable produces a biased estimate of the exposure effect. The present study includes covariates of age and gender, as these variables have been significant covariates in prior multiple mediation models in Nepal.[33] All statistical analyses were performed in SPSS v.17.0 on Windows. Standardised scores were used for analyses of mediator models. Standardised variables were employed (obtained by subtracting the mean and dividing by the standard deviation) in the mediator analyses, in order to reduce the problem of multicollinearity that partly (but not exclusively) arises when interaction terms are introduced in the analysis.

Within the employed statistical procedure, the c path refers to a significant relation between the predictor (X) and the outcome (Y), when not accounting for indirect effects (i.e. total effect). The a path refers to the relationship of the predictor (X) with the mediator (M). The b path refers to the relationship of the mediator (M) with the outcome variable (Y). When M is included in the model, the indirect effect refers to the a b pathway, and c' refers to the direct effect of X on Y. The indirect effect also can be conceptualised as the difference between the total effect and the direct effect ($c-c'$). The present study investigated the theoretical model in which the 'current perceived needs' variable was the mediator (M) for the association between the predictor 'trauma exposure' (X) and the outcome 'distress' (Y). Analyses per country sample were conducted and no between-country comparisons were performed.

Results

Sociodemographic information for respondents in both study sites is presented in Table 1. Table 2 presents the mean scores of the hypothesised predictor (CIDI total score), outcome (GHQ total score) and mediator (HESPER total score) variables.

In both samples a significant total effect was found for trauma exposure on distress when covariates were taken into account, but possible mediation was not (Jordan: 0.42, Nepal: 0.32). In the Jordan sample, there was a significant indirect effect via perceived needs. Analyses confirmed a significant association between the predictor and the putative mediator (a path). Furthermore, perceived needs had a statistically significant association with distress (b path). The association between trauma exposure and distress was no longer statistically significant (c' 0.11) when accounting for the indirect effect of perceived needs (0.31). Age and gender as covariates played no role in predicting distress in this model. The adjusted R^2 was 0.44 for the distress variable in the tested model (i.e. 44% of the distress variance was explained by the tested meditational model) (Fig.1).

In the Nepal sample similarly there was an indirect effect via perceived needs of trauma exposure on distress. Analyses confirmed a statistically significant association between all of the variables in the model. When the indirect effect of perceived needs was included in the model, the direct effect regression coefficient between trauma exposure and distress was reduced from a total effect (c path) of 0.32 to an adjusted effect (c' path) of 0.20. Thus, there remained a direct effect of traumatic exposure on distress when accounting for the perceived needs indirect effect. Trauma exposure in Nepal therefore predicted distress directly as well as

Table 1 Demographic characteristics of respondents at both study sites

	Jordan ($n=269$)	Nepal ($n=269$)
Gender, *n* (%)		
Men	116 (43.1)	139 (51.7)
Women	153 (56.9)	139 (51.7)
Age, years: mean (s.d.)	40.24 (13.36)	36.92 (14.15)
Marital status, *n* (%)		
Married	191 (71.0)	217 (80.7)
Unmarried	56 (20.8)	50 (18.6)
Widowed	16 (5.9)	0
Divorced/separated	6 (2.2)	2 (0.7)
Cohabiting	0	0
Number of children, mean (s.d.)	2.11 (1.95)	2.39 (2.37)
Level of education, *n* (%)		
Illiterate/no formal education	7 (2.6)	108 (40.1)
Primary school (grades 1–6)	29 (10.8)	63 (23.4)
Secondary school (grades 7–12)	104 (38.7)	89 (33.1)
University	129 (48.0)	9 (3.3)
Religion, *n* (%)		
Christian	45 (16.7)	16 (5.9)
Muslim	221 (82.2)	0
Hindu	0	178 (66.2)
Buddhist	0	52 (19.3)
Other religion[a]	3 (1.1)	23 (8.6)
No religion	0	0
Time displaced, year: mean (s.d.)	3.84 (2.18)	18.95 (0.93)

a. Other religions include Kirat, Sanatan, Biswasi, Manab, Nastak (Nepal), Haba'i, Sa'aebiya (Jordan).

Table 2 Mean scores for trauma exposure, distress and perceived needs for both study sites

	Mean (s.d.)	
	Jordan	Nepal
GHQ total score	16.50 (7.30)	13.77 (7.01)
CIDI total score	7.53 (3.62)	4.51 (3.23)
HESPER total score	10.61 (5.88)	8.10 (4.64)

GHQ, General Health Questionnaire; CIDI, Composite International Diagnostic Schedule, past traumatic life events as measured by the traumatic events list (28 items were included in Nepal and 16 in Jordan); HESPER, Humanitarian Emergency Settings Perceived Needs Scale (27 items were included in Jordan and 26 in Nepal).

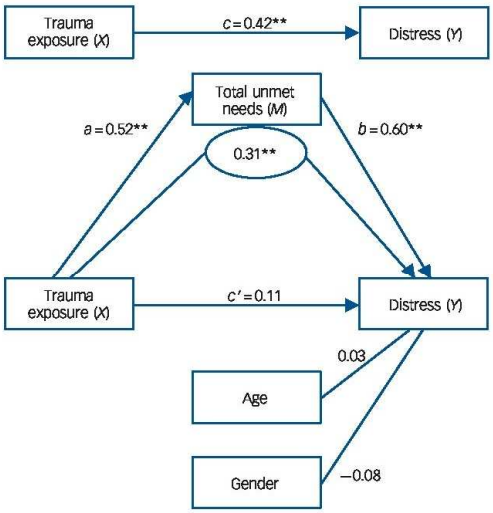

Fig. 1 Mediation model Jordan ($n = 269$).

*$P < 0.05$, **$P < 0.001$; bootstrap resamples: 5000.

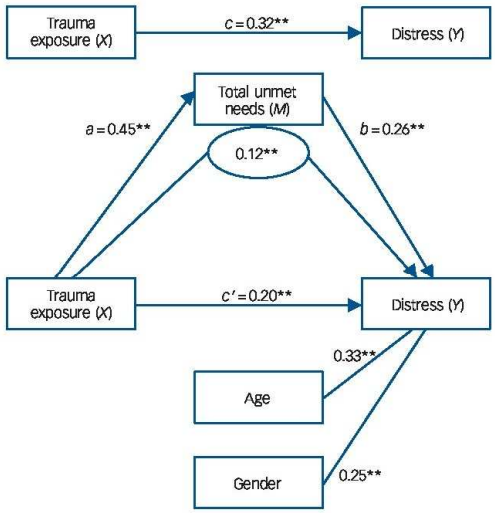

Fig. 2 Mediation model Nepal ($n = 269$).

*$P < 0.05$, **$P < 0.001$; bootstrap resamples: 5000.

indirectly through perceived needs. The significant association of age (older) and gender (female) meant that these were independent predictors of distress in addition to the earlier mentioned direct and indirect pathways of trauma exposure. The adjusted R^2 was 0.34 for the distress variable in the tested model (Fig. 2). Table 3 presents all confidence intervals for the above findings.

Discussion

Main findings

This study tested the hypothesis that there are indirect effects of trauma exposure on distress via current perceived unmet needs. This question informs mental health policy and programmes in humanitarian settings. The study's hypothesis was confirmed for both the Jordan and Nepal samples. It was found that the tested model had a good fit with the Jordan data, where the direct association between traumatic exposure and distress was no longer significant in the model with indirect effects of unmet perceived needs. Similarly, an indirect effect for current needs was found in Nepal. Nepal differed from Jordan in that the Nepal sample showed a significant direct effect of trauma on distress when accounting for unmet needs. Age and gender were significant covariates in Nepal (being female and being older respectively).

The indirect effects in Jordan and Nepal are consistent with previous research. In particular, they support Miller & Rasmussen's mediation model,[16] in that the addition of unmet needs to the model increases the overall explanatory power and it weakens the direct association between trauma exposure and distress.[12] It suggests that the model, which advocates an increased focus on ongoing stressors arising from current difficulties and challenges that life poses compared with a focus largely on past traumatic exposure, may extend beyond conflict and post-conflict

Table 3 Direct and indirect effects for trauma exposure on distress

	Effect (95% CI)	
	Jordan	Nepal
Model 1: total trauma exposure effect (without mediator)[a]		
Trauma exposure	0.42 (0.30 to 0.54)	0.32 (0.22 to 0.42)
Age	−0.02 (−0.13 to 0.09)	0.34 (0.24 to 0.45)
Gender	−0.02 (−0.14 to 0.09)	0.21 (0.11 to 0.32)
Model 2a: direct effects		
Direct effect of trauma and covariates		
Trauma (*c′* path)	0.11 (−0.01 to 0.23)	0.20 (0.08 to 0.32)
Age	0.03 (−0.07 to 0.13)	0.33 (0.23 to 0.43)
Gender	−0.08 (−0.18 to 0.02)	0.25 (0.15 to 0.35)
Direct effect of potential mediator		
Perceived needs (*b* path)	0.60 (0.48 to 0.72)	0.26 (0.14 to 0.38)
Model 2b: indirect effect		
Perceived needs	0.31 (0.24 to 0.39)	0.12 (0.06 to 0.19)

a. Standard multivariate regression with the predictor (trauma exposure) and the covariates (age, gender).

settings to include wider humanitarian settings. These data suggest that for populations that have undergone large-scale traumatic experiences, it is important to look beyond the direct effect model in guiding intervention strategies. As the present study involved samples that had undergone the potentially traumatic experiences several years prior, a plausible explanation for these findings is that the potentially traumatic stressors were distal, whereas perceived needs were proximal. The results also tie in with previous studies that have emphasised the importance of post-displacement stressors compared with past traumatic experiences in predicting mental health outcome, both in post-emergency settings themselves,[34,35] as well as among refugees and asylum seekers in other countries, including Western ones.[36–38] Finally, the results support the relevance of measuring perceived unmet needs, using the newly developed HESPER Scale,[15] also in light of the prevailing broad mental health and psychosocial support framework.[2]

Although the results of this study provide further support for the importance of current stressors in explaining the association between past traumatic exposure and mental health outcomes in humanitarian settings, further research across different settings is required to shed more light on this association. Conceptually, reverse causation in the tested model is unlikely, but could nonetheless be examined through longitudinal study. Regarding statistical analyses, an alternative mediation analysis method for handling multiple mediators is structural equation modelling. However, given the small sample size, the bootstrapping technique employed here made multiple mediator regression analysis the preferred analytical approach. Future studies need to include analyses with additional covariants (for example time since displacement) included in the model.

The finding that older age and female gender independently predicted distress in one of the two settings fits in with the inconsistent results previous research has produced. These variables, in particular female gender, have been found to be predictive of mental health outcome in some studies,[4,38,39] but not in others.[5,39] An explanation for this may be that both older age and female gender as risk factors for poor mental health outcome may be context-dependent, for example according to culture, or type of mental health outcome.[33]

Implications

This study has several implications for policy and practice. If poor mental health (such as distress) may in part be mediated by post-emergency current stressors, as the findings of this study suggest, it is highly plausible – and testable – that positive changes to the post-emergency environment may potentially attenuate the impact of past traumatic experiences. Inter-sectoral humanitarian action targeting perceived unmet needs may therefore have a substantial impact in reducing (or in absence potentially worsening) mental health complaints experienced by emergency-affected populations.[38] As has been advocated recently by several authors,[2,3,10,12–14] rather than relying solely on resource-intensive trauma-focused interventions to mitigate the impact of traumatic exposure, the results indicate that interventions that broadly affect the recovery environment may hold promise. Multidisciplinary interventions that aim to reduce current stressful social and material conditions caused or worsened by humanitarian emergencies may potentially buffer against the negative impact of traumatic experiences on an individual's mental health. Clearly, trauma-focused care is indicated for those with serious post-traumatic stress complaints; however, it does confirm the need for a more integrated approach to mitigate the impact of potential traumatic exposure in humanitarian settings. In line with a recent global research priority setting exercise for mental health and psychosocial support in humanitarian settings,[40] future research should increasingly evaluate the distinctive pathways by which emergencies have an impact on mental health. The better science unravels the mechanisms of that association (i.e. influence of contextual or protective factors), the easier it becomes to match scarce resources with adequate intervention.

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First received 31 Aug 2011, final revision 21 May 2012, accepted 14 June 2012

Funding

Data collection in Jordan was funded by the Jordanian Nursing Council, WHO Jordan, and the University of London Central Research Fund. Data collection in Nepal was funded by WHO Geneva and United Nation High Commissioner for Refugees Nepal; WHO Nepal providing further support. M.S. is funded by a PhD studentship grant of the Medical Research Council (UK). G.T. is funded by a National Institute for Health Research (NIHR) Applied Programme grant awarded to the South London and Maudsley NHS Foundation Trust and is affiliated with the NIHR Specialist Mental Health Biomedical Research Centre at the Institute of Psychiatry, King's College London and the South London and Maudsley NHS Foundation Trust.

Acknowledgements

The steering group of the HESPER project includes M.v.O. and Dr Andre Griekspoor at WHO Geneva, and G.T., Professor Louise Howard, Dr Heidi Lempp, Dr Morven Leese and M.S. at the Institute of Psychiatry, King's College London. M.J. would like to thank Dr Brandon Kohrt and Dr Ivan Komproe for their important contributions. Data collection in Jordan was organised by Dr Anita Marini of WHO Jordan, and was implemented by Accurate Opinion; United Nation High Commissioner for Refugees provided advice on sampling. Data collection in Nepal was organised by HealthNet TPO/TPO Nepal.

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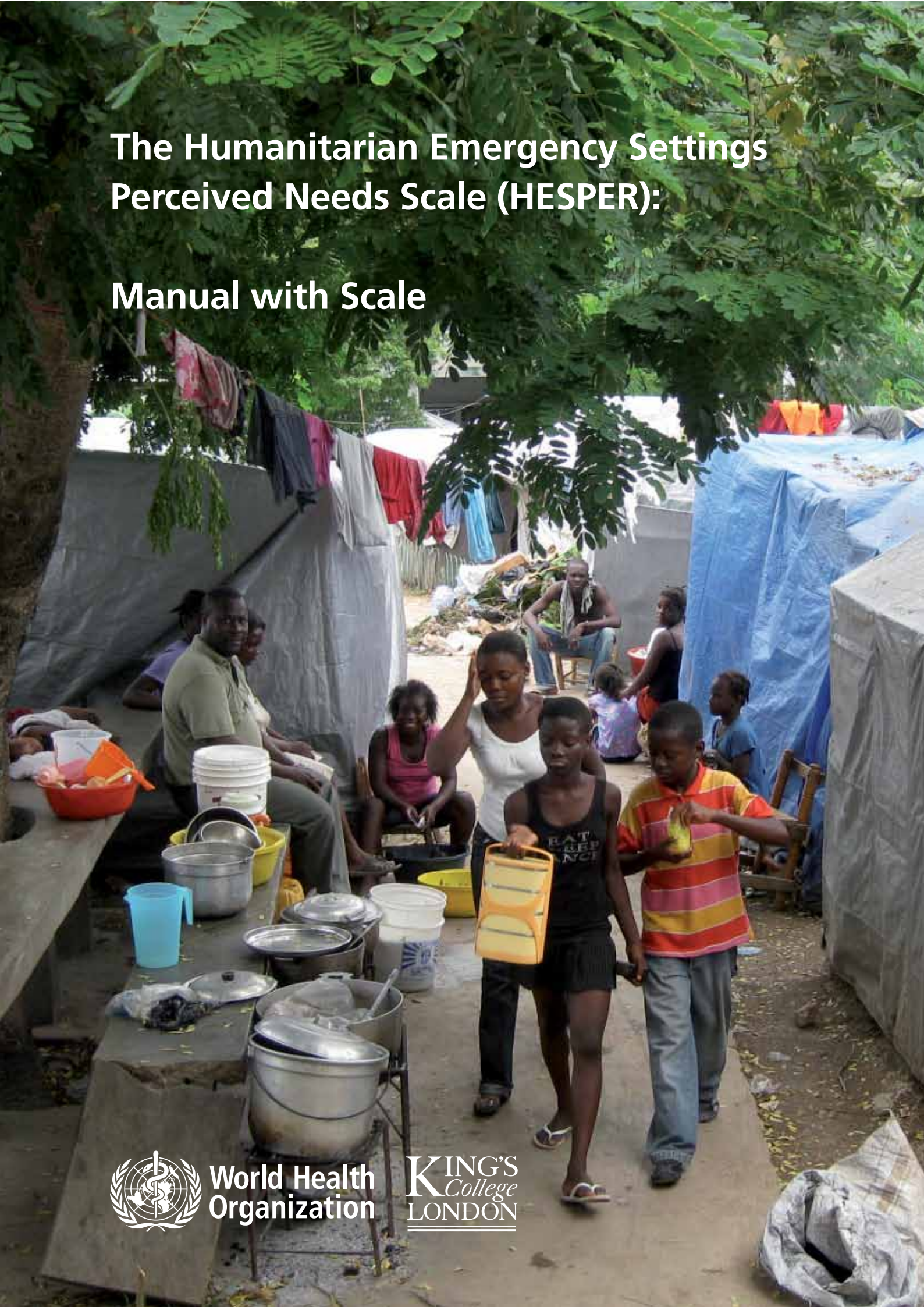
APPENDIX F3
HESPER manual

See following pages for HESPER manual.

The Humanitarian Emergency Settings Perceived Needs Scale (HESPER):

Manual with Scale



World Health Organization

KING'S College LONDON

WHO Library Cataloguing-in-Publication Data

The humanitarian emergency settings perceived needs scale (HESPER): manual with scale.

1.Emergencies. 2.Relief work. 3.Disasters. 4.Humans. 5.Needs assessment. 6.Manuals. I. World Health Organization. II. King's College London.

ISBN 978 92 4 154823 6 (NLM classification: WA 295)

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Suggested citation: World Health Organization & King's College London (2011). *The Humanitarian Emergency Settings Perceived Needs Scale (HESPER): Manual with Scale*. Geneva: World Health Organization.

Cover page photo:
Bolosse displacement camp,
Port-au-Prince, Haiti, 2010,
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The Humanitarian Emergency Settings Perceived Needs Scale (HESPER):

Manual with Scale

World Health Organization

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Acknowledgements

The development of the HESPER Scale was a collaborative project between the Department of Mental Health and Substance Abuse at the World Health Organization (WHO) Geneva, and the Institute of Psychiatry at King's College London (KCL).

Maya Semrau (KCL) developed the science of the HESPER Scale, conducted each of the seven pilot and field studies, and drafted this publication - all in close consultation with Dr Mark van Ommeren (WHO).

The Medical Research Council (UK) is gratefully acknowledged for funding Maya Semrau (KCL) through a three-year PhD studentship grant.

Steering Group:
The HESPER Project Steering Group consisted of Dr Mark van Ommeren and Dr Andre Griekspoor at WHO, and Professor Graham Thornicroft, Professor Louise M Howard, Dr Heidi Lempp, Dr Morven Leese and Maya Semrau (all at KCL).

International Advisory Group:
The HESPER International Advisory Group consisted of Dr Paul Bolton (John Hopkins University), Mr Kaz de Jong (Medicins Sans Frontieres Holland), Dr Nadine Ezard (Monash University), Prof Richard Garfield (Columbia University), Dr Johan Heffinck (at ECHO during the first two years of the project), Dr Lynne Jones (International Medical Corps), Dr Helen McColl (International Rehabilitation Council for Torture Victims), Dr Pau Pérez-Sales (Medicos del Mundo), Dr Shekhar Saxena (WHO), Dr Mike Slade (KCL), Dr Egbert Sondorp (London School of Hygiene and Tropical Medicine), Dr Zachary Steel (University of New South Wales), Dr Wietse Tol (HealthNet TPO, Yale University), and Dr Mike Wessells (Columbia University).

Gaza:
Data collection in Gaza was organized by Fafo Institute for Applied International Studies (Dr Åge Tiltnes and Mr Hani Eldada). The WHO Office in Gaza (Mr Dyaa Saymah) provided advice. Funding was provided by WHO Geneva and Fafo.

Haiti:
Data collection in Haiti was organized by International Medical Corps Haiti (Ms Isabelle Pilotte, Mr Daniel Joselito Charles, Mr Charles Lor and Mr Jason Erb).

Jordan:
Data collection in Jordan was organized by WHO Jordan (Dr Hashim El Mousaad, Dr Anita Marini, and Dr Nada Al Ward). Data collection was implemented by Accurate Opinion (field-testing), and the

Market Research Organisation (pilot-testing). Data collection was funded by the Jordanian Nursing Council, WHO Jordan, and the University of London Central Research Fund. UNHCR provided advice on sampling.

Nepal:
Data collection in Nepal was organized by HealthNet TPO / TPO Nepal (Mr Nagendra Luitel and Dr Mark Jordans). Funding was provided by WHO Geneva. UNHCR Nepal and WHO Nepal provided further support.

Sudan:
Data collection in Sudan was organized by Humanitarian Accountability Partnership (HAP International) (Ms Monica Blagescu).

United Kingdom:
Data collection in the United Kingdom was facilitated by the British Refugee Council (Ms Rachael Hardiman and Mr Alistair Griggs).

We thank all respondents, who participated in our 2008 expert survey, including Dr Alastair Ager (Columbia University), Mr F Jiovani Arias (Fundación Dos Mundos), Dr Nancy Baron (Global Psycho-Social Initiatives), Mr Mihir R Bhatt, (All India Disaster Mitigation Institute), Ms Christina Bitar (UNIFIL), Dr Cécile Bizouerne (Action Contre la Faim), Ms Nan Buzard (American Red Cross), Dr Jorge Castilla (WHO/PAHO), Prof Fatima Castillo (University of the Philippines), Dr Alessandro Colombo (International Rescue Committee), Ms Anjana Dayal (ICRC), Prof Joop de Jong (Vrije Universiteit Amsterdam), Dr Pamela DeLargy (UNFPA), Dr Linda Doull (Merlin), Dr Carolina Echeverri (WHO/PAHO), Dr Girma Ejere (Learning and Skills Council London), Dr Nadine Ezard (LSHTM), Mr Ananda Galappatti (Good Practice Group), Prof Rita Giacaman (Birzeit University), Dr Johan Heffinck (ECHO), Dr Lynne Jones (International Medical Corps), Dr Barbara Lopes Cardozo (Centers for Disease Control and Prevention), Dr Amanda Melville (UNICEF), Ms Carlinda Monteiro (Christian Children's Fund), Mr Charles Owusu (Christian Children's Fund), Ms Chrishara Paranawithana (WHO), Dr Jonathan Polonsky (WHO), Mr Bhava Poudyal (International Catholic Migration Commission), Dr Joe Prewitt (American Red Cross), Ms Sabine Rakotomalala (Terre des Hommes), Dr Bayard Roberts (LSHTM), Dr Jorge Rodriguez (WHO/PAHO), Prof Daya Somasundaram (University of Jaffna), Dr Peter Ventevogel (HealthNet TPO), Dr Johan von Schreeb (Karolinska Institute), Dr Vivien Walden (Oxfam GB), Dr Xiangdong Wang (WHO), Dr Mike Wessells (Columbia University), Ms Wendy Wheaton (independent consultant), Mr John Williamson (USAID), and Dr M Taghi Yasamy (WHO).

We thank Dr Xavier de Radigues (WHO) for reviewing the sections on sampling in this publication.

We thank all interviewers, translators, interpreters and other support staff in Gaza, Haiti, Jordan, Nepal, and Sudan.

Our special thanks go to the interviewed participants in Gaza, Haiti, Jordan (displaced Iraqi people), Nepal (Bhutanese refugees), Sudan, and the United Kingdom (refugees from the Democratic Republic of the Congo).

Table of Contents

Darfur, 2004, © WHO

General Introduction

Needs assessments are vital to identify the needs that are present in an affected population, and to inform the humanitarian response. There have been repeated recommendations for increased participation of affected populations in humanitarian assessment. Participation is seen as essential for avoiding basic mistakes in resource allocation, programme design, accountability, and for supporting psychosocial well-being.

In the humanitarian field, most needs assessments tend to use either population-based "objective" indicators (for example malnutrition or mortality indicators), or qualitative data based on convenience samples (for example through focus groups or key informant interviews). Whilst the latter method is not able to paint a full population-picture, the former is not able to gather information on people's subjective perception of needs.

The HESPER Scale was developed to fill this gap. It aims to provide a method for assessing perceived needs in representative samples of populations affected by large-scale humanitarian emergencies in a valid and reliable manner.

This manual includes the HESPER Scale (see Appendix 1), as well as a detailed explanation of how to use the HESPER Scale, how to train interviewers, and how to organise, analyze and report on a HESPER survey.

1. The HESPER Scale

1.1 WHAT IS THE HESPER SCALE? – A BRIEF OVERVIEW

The Humanitarian Emergency Settings Perceived Needs Scale (HESPER) (see Appendix 1) aims to provide a quick, scientifically robust way of assessing the *perceived serious needs* of people affected by large-scale humanitarian emergencies, such as war, conflict or major natural disaster. Perceived needs are needs which are felt or expressed by people themselves and are problem areas with which they would like help.

The HESPER Scale assesses a wide range of social, psychological and physical problem areas. However, it does not provide an answer as to whether, or how to, offer help. It simply aims to identify those serious perceived problems that are common in a population. These problems should then be assessed and addressed in more detail.

The HESPER Scale was developed by the World Health Organization and King's College London in order to fill several gaps in the humanitarian field. It enables needs assessments to be based directly on the views of people affected by humanitarian emergencies, and provides a more accurate picture of the serious problems with which the overall emergency-affected population wants help.

1.2 WHO MAY USE THE HESPER SCALE?

The HESPER Scale may be used by anybody in its current form for non-commercial purposes. Should you wish to make any modifications to the scale, or translate the scale into another language, you will need to get permission from WHO Press (for contact details, see inside cover page). Currently the HESPER Scale (i.e. Appendix 1 only) is available in English, French, Spanish, Arabic, Nepali, and French / Haitian Creole. *Word* files of the different HESPER Scale language versions are available upon request.

1.3 IN WHAT CONTEXTS MAY THE HESPER SCALE BE USED?

The HESPER Scale is applicable to a wide range of humanitarian settings, including those caused by natural events (such as earthquakes, floods, tsunamis, volcanoes, hurricanes, droughts or epidemics), as well as during war or other large-scale conflict. The scale can be used in acute or chronic humanitarian situations, urban or rural settings, and camp or community contexts. Whilst the scale is designed to be used in low- and middle-income countries as this is where most large-scale disasters occur, it may potentially also have value in large disasters in high-income countries (e.g. involving population displacements such as after Hurricane Katrina).

The scale is intended for administration to people in the general adult population, and has not been tested for use in people under 18 years of age.

1.4 HOW MAY THE HESPER SCALE BE USEFUL?

The HESPER Scale may be administered to representative samples, to estimate the presence of perceived needs in a population.

Some of the advantages of the HESPER Scale are outlined in Box 1.

Box 1

The advantages of the HESPER Scale are

- It can be completed rapidly (between 15 to 30 minutes on average).
- It can be easily self-learned and used on the basis of a self-training manual by local staff (without extensive use of trainers).
- It is culturally applicable to a wide range of populations and settings in low- and middle-income countries.
- It is usable in convenience samples very early on in emergencies, and can be used in representative samples at later stages of an emergency, thereby creating the possibility of tracking people's perceived needs over time.
- It is consistent with the IASC *Guidelines on Mental Health and Psychosocial Support in Emergency Settings* (1), which includes a focus on perceived needs.
- It is valid (meaning that it measures what it was intended to measure) and reliable (meaning that it provides consistent results across different raters and at different times).
- In addition to its *core* items that assess almost universally occurring needs, *locally developed* items may also be added to account for needs that are specifically relevant to the local context.
- It promotes increased accountability towards and participation of the affected population.
- It assesses perceived needs across a broad range of problem areas.
- It is freely available and easy to use.

The HESPER Scale is, as far as we are aware, the first scale which has been shown to measure people's perceived needs in a reliable and valid manner in representative samples (see section 1.8 for psychometric results from three field-sites). It thus combines the strengths of survey research (i.e. representative samples) with that of participatory methods (i.e. measuring *perceived* needs). We are not aware of any other brief multi-sectoral tool with tested reliability and validity that quantifies the prevalence and distribution of people's perceived needs in the general population in humanitarian settings. The scale complements, rather than replaces, existing rapid participatory assessment methodologies, which are currently the standard method of assessing perceived needs.

The HESPER Scale enables the rapid identification of broad problem areas with which the population is likely to want help. This information can then be determined for the population or subpopulation to

identify perceived needs of the populations affected. Subsequent in-depth participatory assessments are then needed to understand the expressed needs, and to decide what exact interventions and supports would be helpful. It is possible to disaggregate the results and provide population profiles according to gender, age groups, ethnicity, or other relevant subpopulation groupings. The scale focuses on needs as perceived by the adult population, which may include concerns for their children.

By administering the HESPER Scale at multiple times, the scale may also be used to monitor the degree to which the humanitarian response is perceived by the affected people to be meeting their needs. The scale is therefore in line with the aim of increased accountability towards and participation of crisis-affected populations in assessments (2-5).

Although the HESPER Scale was developed for use in representative samples, the scale may also be used in convenience samples. This may be appropriate in some situations - such as the first few days or weeks of a large sudden-onset crisis - where representative sampling may not be possible. Whilst information can be collected more quickly and easily by using convenience samples, it should be noted that it is unlikely to be representative of the population at large.

The scale may also be used during service delivery to help individuals better. Indeed, the HESPER Scale can be a helpful tool for case management, which is a key element of social work and mental health care.

1.5 WHY WAS THE HESPER SCALE DEVELOPED?

The HESPER Scale was developed with the aim of filling at least four important gaps in the humanitarian field. First, humanitarian workers currently have some difficulties in conducting population-based psychosocial needs assessments. In the Inter-Agency Standing Committee's *Guidelines on Mental Health and Psychosocial Support in Emergency Settings* (1), mental health and psychosocial needs are seen to be diverse. Needs may be related to illness which predates the emergency (e.g. pre-existing alcohol dependence), they may relate to events which occurred during the emergency (e.g. earthquake, exposure to violence), or they may relate to the current emergency situation (e.g. sources of stress in a newly set-up camp). Needs which relate to people's current circumstances are influenced by aid in a range of humanitarian sectors. A person may thus experience trauma- or loss-induced psychological distress, but at the same time may for instance also suffer severely due to a perceived lack of security and experiencing psychosocial needs related to water and sanitation (e.g. if the available toilet facilities are in an insecure location, or in such state that they undermine people's experience of dignity). The IASC mental health and psychosocial framework is consistent with multi-sectoral assessment of *perceived* needs to identify people's sources of stress. The IASC Guidelines recommend participatory multi-sectoral needs assessments but do not answer the question of how to do population-based perceived needs assessments.

Second, current studies tend to focus mostly on the epidemiology of mental disorders in populations exposed to emergencies. A key question in the humanitarian field is the extent to which the distress or disorder within an affected population results from either events that have already occurred (i.e. trauma or loss), or those arising from the recovery environment (e.g. stressors in the current context) (6-8). A questionnaire measuring perceived needs gives researchers a tool to answer this key question and inform mental health and psychosocial support policy and practice.

Third, there are increasing calls to assess people's perceived needs, and to use perceived needs as key indicators for project design, monitoring and evaluation (1-5, 9). Similarly, in a recent research agenda priority ranking exercise for humanitarian settings, three of the ten most highly prioritized research questions included the participation of affected populations; the identification of affected populations' stressors was ranked as top priority (10). Currently, perceived needs are assessed mostly through rapid participatory assessments, which tend to involve gaining rich, qualitative data from selected stakeholders. Although very valuable, such rapid participatory assessments cannot provide a population picture. Currently, in the humanitarian field most population-based quantitative assessments are of "objective" indicators, such as mortality, nutrition and livelihood data. These indicators are often defined by outsiders (i.e. non-members of the affected population) and are - as far as we know - unable to quantify the prevalence and distribution of needs as perceived by members of the population themselves. The HESPER Scale may thus fill a gap by providing population-based quantitative assessments of perceived needs, based directly upon the views of those affected by the disaster.

Fourth, existing humanitarian needs assessment tools typically have unknown reliability or validity. For example, basic statistical knowledge on inter-rater reliability is essential in estimating the extent to which the results of assessments are likely to vary across interviewers. Similarly, test-retest statistics are necessary in order to know the extent to which interviewers gather consistent responses over time. Furthermore, information on criterion-related validity (i.e. strength of the relationship with a measurable external criterion) is helpful in judging whether a tool assesses what it purports to measure. The scientific study of reliability and validity of assessment (also called psychometrics) has, as far we are aware, never been applied to multi-sectoral humanitarian assessments. Psychometrics, a discipline originally developed by psychologists, is now widely applied in a range of disciplines (e.g. engineering, general medicine, health economics), whether or not the instruments measure underlying psychological constructs.

1.6 WHAT INSTRUMENT IS THE HESPER SCALE MODELLED ON?

The HESPER Scale focuses on diverse needs in the general population. It was modelled after a mental health instrument, the Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) (11), which measures both met and unmet perceived needs of people with mental disorders across 22 domains of life. The CANSAS is a shortened version of the Camberwell Assessment of Need (CAN) with well-established reliability and validity (12, 13). The CANSAS is now the most widely used needs assessment instrument for people with mental health problems. It has been modified successfully for use in adults who have both mental disorders and learning disabilities (14), elderly people with

mental disorders (15), mothers with mental disorders (16), and forensic populations (17). The CAN has been translated into at least 25 languages, and has been adapted for use in several countries (18). Both the CAN and CANSAS have been used on a wide range of populations including asylum seekers and refugees in the UK (19, 20), as well as torture victims in centres of the International Rehabilitation Council for Torture Victims (IRCT) across several countries. The different versions of the CAN are available through www.iop.kcl.ac.uk/prism/can

1.7 HOW WAS THE HESPER SCALE DEVELOPED?

The HESPER Scale was developed over three phases:

- Phase 1 (2008): Development of a first draft scale through a process of item generation and item reduction, based on first a literature review, and second a survey with humanitarian experts.
- Phase 2 (2009): Pilot-testing of the draft scale in Jordan with displaced Iraqi people, in Gaza, Sudan, and in the UK with refugees from the Democratic Republic of the Congo (DRC), to assess the scale's feasibility, intelligibility and cultural applicability, and to establish the suitability of training materials.
- Phase 3 (2010): Field-testing of the revised draft scale in Jordan with displaced Iraqi people, in Haiti with people living in post-earthquake displacement camps, and in Nepal with Bhutanese refugees, to assess its psychometric properties (i.e. reliability and validity).

Phase 1: Development of the first draft scale

A zero draft and first draft of the scale (21) (available upon request) incorporating the universally relevant core need items were developed in 'Phase 1' of the project through a process of item generation and item reduction. For item generation a long list of potential need items for inclusion into the draft scale were extracted from relevant literature (grey and peer-reviewed). Only sources which directly dealt with emergency-affected people's views of *perceived* needs were employed, such as previous humanitarian needs assessments, existing NGO assessment reports, and published journal articles on perceived needs (see Table 1). Only items that were mentioned at least twice in any of these sources were included into the zero draft scale.


Sri Lanka, following the Indian Ocean tsunami, 2005, © WHO

Table 1: Sources employed in the HESPER item generation process

Source	Country of study	Type of disaster	Period of data collection	Type of data collection
Asia				
Fritz Institute 2005 (22)	Indonesia, India, Sri Lanka	tsunami	Oct 2005	structured interviews
Fritz Institute 2007 (23)	Indonesia	earthquake	May – June 2006	face-to-face interviews with structured questionnaire
Fritz Institute 2007 (24)	Indonesia	tsunami	July 2006	face-to-face interviews with structured questionnaire
Poudyal et al 2007 (25)	Indonesia	conflict	Sept 2006	free-listing exercises, key informant interviews, focus groups
Thapa & Hauff unpublished (26)	Nepal	conflict	June – July 2003	cross-sectional household survey
Fritz Institute 2006 (27)	Pakistan	earthquake	Aug 2006	structured interviews
Africa				
Barton & Mutiti 1998 (28)	Uganda	conflict	Jan – Apr 1998	key informant interviews, focus groups
Betancourt et al 2009 (29)	Uganda	conflict	July – Aug 2004	free-listing exercises, key informant interviews
Bolton & Ndogoni 2000 (30)	Rwanda	conflict and genocide	Oct – Dec 1999	free-listing exercises, key informant interviews, pile sorts
Lee & Bolton 2007 (31)	Kenya	conflict	Oct – Nov 2005	free-listing exercises, key informant interviews
Murray et al 2006 (32)	Congo (DRC)	conflict	Feb 2006	free-listing exercises, key informant interviews
Briant & Kennedy 2004 (33)	Egypt	conflict	not known	interviews with questionnaires
Middle East				
Giacaman et al 2007 (34)	Occupied Palestinian Territories	conflict	Sept – Nov 2004	focus groups
Central America				
Pérez-Sales et al 2005 (35)	El Salvador	earthquakes	Apr 2001	semi-structured interview (CCI), including qualitative responses, focus groups

Need items were then selected and reduced into the first draft scale based on a survey with a wide range of purposively sampled general and psychosocial humanitarian experts across the world (24 male and 19 female), as well as six national aid workers in Sierra Leone. The survey included both quantitative and qualitative responses. For quantitative analyses participants rated the need items which had been compiled during the item generation stage of the project on an 11-point scale (0 to 10) of importance for inclusion into the scale, and suggested additional perceived need items that they considered important for inclusion. In addition, participants were encouraged to provide any further comments or feedback (21) (available upon request).

Since all items were rated as at least moderately important by participants, a broad approach was taken in the selection of items into the draft scale. The revision of items therefore primarily involved their rephrasing and regrouping. One item was added based on participants' suggestions. An overview of the changes that were made to need items based on this survey is available upon request (21).

A section was also introduced to the HESPER Scale whereby those needs which have been rated to be present by respondents are ranked in their order of importance, where numerous needs are unmet. This may enable prioritisation of needs and emergency relief to those areas where it is perceived to be needed most.

Subsequently, the draft HESPER Scale was reworded to make it more intelligible for respondents, and was restructured in terms of the order of its items (with basic physical survival needs first, and items covering community issues last). The rating scale was simplified to ease use of the scale in the field. An interviewers' training manual was also developed (see Appendix 2).

Phase 2: Pilot-testing

The draft HESPER Scale was then pilot-tested in Jordan with displaced Iraqi people, in Gaza, and in the South of Sudan, after having been pre-tested in the UK with refugees from Democratic Republic of the Congo (for details see Table 2). Pilot-testing was a learning exercise to understand the scale's feasibility, intelligibility and cultural applicability (cf. van Ommeren et al 1999 (36)), as well as assessing methodologies for subsequent field-testing. During pilot-testing respondents were:

- Administered the draft HESPER Scale by local interviewers familiar with the cultural setting. For a sub-sample, a silent rater was also present to assess inter-rater reliability. This involves two raters (one interviewer and one observer) making ratings during an interview with a respondent. It is then assessed how consistent their ratings are.
- Administered a participant survey, in which they were asked whether they thought that any perceived need items were missing from the draft scale and the extent to which the scale was understandable.
- Participated in focus group discussions, in which they were asked to report on the intelligibility, (cultural) acceptability, relevance and comprehensiveness of the scale's items. The suitability of the content and concepts were also checked.
- Interviewers were asked to complete an interviewer survey, in which they provided feedback

on the intelligibility of the HESPER Scale and interviewers' training manual, and whether they experienced any difficulties in conducting the interviews.

Following pilot-testing, the HESPER Scale was revised into a slightly shorter draft for field-testing (21) (available upon request), and revisions were made to the interviewers' training manual.

Table 2: HESPER pilot-testing and field-testing sites

Pilot- or field-testing	Month / Year	Country	Location	Population	Sample size	Local partner(s)
Pilot-testing	May 2009	United Kingdom	Hull	Refugees from Democratic Republic of the Congo, resettled from refugee camps in Zambia	7	British Refugee Council
Pilot-testing	June 2009	Jordan	Amman	Displaced persons from Iraq	40	WHO Jordan
Pilot-testing	October 2009	Occupied Palestinian Territories	Gaza City	Local population	40	Fafo Gaza, WHO Gaza
Pilot-testing	December 2009	Sudan	Juba	Local population	42	Humanitarian Accountability Partnership (HAP International)
Field-testing	July 2010	Jordan	Amman, Zarqa, Irbid, Madaba	Displaced persons from Iraq	269	WHO Jordan, Jordanian Nursing Council, UNHCR
Field-testing	September 2010	Haiti	Port-au-Prince, Jacmel	Local population in post-earthquake displacement camps	279	International Medical Corps Haiti
Field-testing	October / November 2010	Nepal	Beldangi-II camp, Jhapa district	Refugees from Bhutan	269	HealthNet TPO/ TPO Nepal, UNHCR Nepal, WHO Nepal

Phase 3: Field-testing

After having pilot-tested the scale in small samples, the HESPER Scale was then field-tested with larger samples. Field-testing took place in Jordan with displaced Iraqi people, in displacement camps in Haiti (eight months after the 2010 earthquake), and in Nepal with Bhutanese refugees (see Table

2). The goals for field-testing were to assess the HESPER Scale's reliability and validity:

- To measure inter-rater reliability, a second interviewer acted as silent rater.
- To assess test-retest reliability, respondents were interviewed a second time one week after the first interview by the same interviewer.
- Criterion (concurrent) validity is established by assessing the extent to which a new measure correlates with other existing similar measures administered at the same time. To test this, relevant HESPER items were compared to similar questions of an established quality-of-life instrument, the World Health Organization Quality of Life-100 Instrument (WHOQOL-100) (37).

A few small changes in the wording of seven items were made to finalize the HESPER Scale following field-testing.

1.8 WHAT ARE THE HESPER SCALE'S PSYCHOMETRIC PROPERTIES?

The results of field-testing were as follows (detailed results are available upon request):

- One-week test-retest reliability (intraclass correlation coefficients (ICCs); absolute agreement) – for the full scale – was 0.961 in Jordan, and 0.773 in Nepal (it should be noted that item-level test-retest reliability was low for some items in Nepal). Test-retest reliability was not assessed in Haiti.
- Inter-rater reliability ICCs (absolute agreement) were 0.998 in Jordan, 0.986 in Haiti, and 0.995 in Nepal.
- Correlations with selected items of the WHOQOL-100 were roughly as predicted, suggesting criterion (concurrent) validity in the three tested sites.
- In terms of face and content validity, survey respondents in 'Phase 1' of the project considered the list of HESPER items to be comprehensive and appropriate, and found each of the HESPER items to be of at least moderate importance on average. Focus group participants during pilot-testing in Jordan, Gaza and Sudan ('Phase 2') also considered the list of HESPER items to be comprehensive, and found all HESPER items to be understandable, relevant and culturally applicable.
- The average time to administer the HESPER Scale was 15 minutes (SD=4 min) in Jordan, 21 minutes (SD=12 min) in Haiti, and 22 minutes (SD=6 min) in Nepal.

1.9 WHAT IS THE FINAL STRUCTURE OF THE HESPER SCALE?

The final version of the HESPER Scale is displayed in Appendix 1. Perceived needs are assessed across 26 need items, which each include a short item heading, as well as an accompanying question. Ratings are then made for each need item according to unmet need (or serious problem, as perceived by the respondent), no need (or no serious problem, as perceived by the respondent), or no answer (i.e. not known, not applicable, or answer declined). Respondents are also asked to name any other unmet needs not already listed. Among items that have been rated as unmet need, respondents are asked to rank their three most serious problems (hereafter referred to as priority ratings).

2. The HESPER Assessment Process

2.1 OVERVIEW OF THE HESPER ASSESSMENT PROCESS

This section provides a brief overview of the HESPER assessment process. The remainder of this document then explains how to implement this process in more detail.

Please note that while this manual provides all the necessary information on the HESPER Scale and its use, the manual only provides a brief overview of the other processes involved in the design, implementation and analyses of a survey. Readers may need to consult other resources (see Reference section), or collaborate with experienced colleagues in order to carry out a HESPER survey.

Before interviews

1. Obtain necessary permissions to conduct the HESPER survey. Ensure that you have sufficient resources and time for the survey.
2. Decide on your target population.
3. Prepare the HESPER Scale (see Appendix 1) and interviewers' training manual (see Appendix 2) for use in the local context and target population.
4. Decide on your sampling method and sample size.
5. Recruit local interviewers to conduct the interviews.
6. Train interviewers to administer the HESPER Scale using the interviewers' training manual (see Appendix 2).

During interviews

1. Select and recruit respondents based on your sampling method.
2. Interview respondents.

After interviews

1. Enter data from the HESPER Scale into an electronic file. Data should be double-checked or double-entered to ensure accuracy, and then cleaned.
2. Analyse the data with a statistical programme. Possibly disaggregate the data according to sub-groups in the population.
3. Present the data in a table, graph or text format to obtain an overview of the results.
4. Identify potential errors and biases in the results.
5. Communicate the results to relevant stakeholders in plain language (see Appendix 3 for an example).
6. Follow-up the HESPER assessment with key informant interviews or focus group discussions, to obtain a more in-depth understanding of the results.
7. Encourage stakeholders to address prioritized needs.
8. Where possible, monitor changes in perceived needs over time.

2.2 THE HESPER ASSESSMENT PROCESS IN DETAIL

2.2.1 Before interviews

1. Initial considerations

You will likely need to get permission from the local or governmental authorities to conduct your survey. Where feasible and appropriate, obtain the support of the local community by informing them of your plans for the survey, the reasons for wishing to conduct the survey, and the methods used. Random sampling (see section 2.2.1 – 4a) for example can cause conflict and concern if members of the affected population do not understand why others are selected for interview and they are not. The results of the survey should be fed back to the relevant stakeholders (including the affected population) after completion.

Ensure that you have sufficient resources (i.e. funds, access to staff, transport etc.) before conducting the survey, and that the survey will be feasible (e.g. in terms of security, accessibility of populations, time required etc). See Box 2 for potential costs that may arise during a HESPER assessment.

Box 2

Potential costs of a HESPER assessment

- Interviewer and supervisor salaries
- Training costs, including:
  - Trainer's salary
  - Payment for interviewers' time during training
  - Food and drink for interviewers during training
  - Training materials, e.g. printing of interviewers' training manual, stationary etc.
- Payment of support staff, e.g. interpreter, data entry clerk, security staff etc
- Transport costs, e.g. to transport interviewers to interview locations
- Translation of materials before interviews (where applicable)
- Translation of data after interviews (where applicable)
- Printing of materials for interviews
- Other materials, e.g. stationary, ID cards for interviewers etc

2. Deciding on your target population

Examples of target populations to which the HESPER Scale may be applicable are people living in a particular displaced persons camp, those living in several displaced persons camps across a particular area, or the population of an entire village, city or country.

You may decide to employ inclusion or exclusion criteria. Please note that the HESPER Scale's psychometric properties have so far been tested in adults only.

3. Adapting the HESPER Scale and interviewers' training manual to the local context

As the HESPER Scale should be used in the local language, you will first need to find out whether the required language version already exists. If it does not, you will need to translate the HESPER Scale into the relevant language, which requires permission from WHO Press (see inside cover page for details). If possible, the interviewers' training manual (see Appendix 2) should also be translated into the language spoken by interviewers.

The HESPER Scale includes the term 'community' in several places. This term should be replaced with the term most suitable to the local geographical context (e.g. village, town, neighbourhood, camp etc) throughout the HESPER form before interviews take place.

When using the HESPER Scale, additional socio-demographic characteristics should always be collected, in order to be able to make comparisons between different sub-groups of the population. These should at the very least include gender and age. Other example variables which may be useful to collect include marital status, number of children, location (e.g. name of town, camp, or area of city), employment status, occupation, years of formal education, or length of time of displacement. It is also important to record the interviewers' name on each data sheet, as well as a participant number. Participant numbers should be used instead of names, to ensure confidentiality and anonymity of data.

One of the advantages of the HESPER Scale is that in addition to the core items, there is the option to add items specific to the local context. These context-specific items may be chosen based on previous key informant interviews or focus group discussions, or on field-observations of potentially important issues. Table 3 displays examples of additional items which may be relevant in some contexts. These are items which were added in some of the HESPER field-testing sites.

Darfur, 2004, © WHO

Table 3: Examples of context-specific HESPER items

Context-specific HESPER items	Relevant in what contexts?
Residency or resettlement Do you have a serious problem because you do not have residency where you live, or because you have not been resettled to another country?	particularly relevant in surveys with refugees
Burying and mourning the dead in your community Is there a serious problem in your community because bodies of the dead have not been dealt with according to people's religious and cultural beliefs?	particularly relevant when mortality is very high

4a. Selecting respondents - Sampling

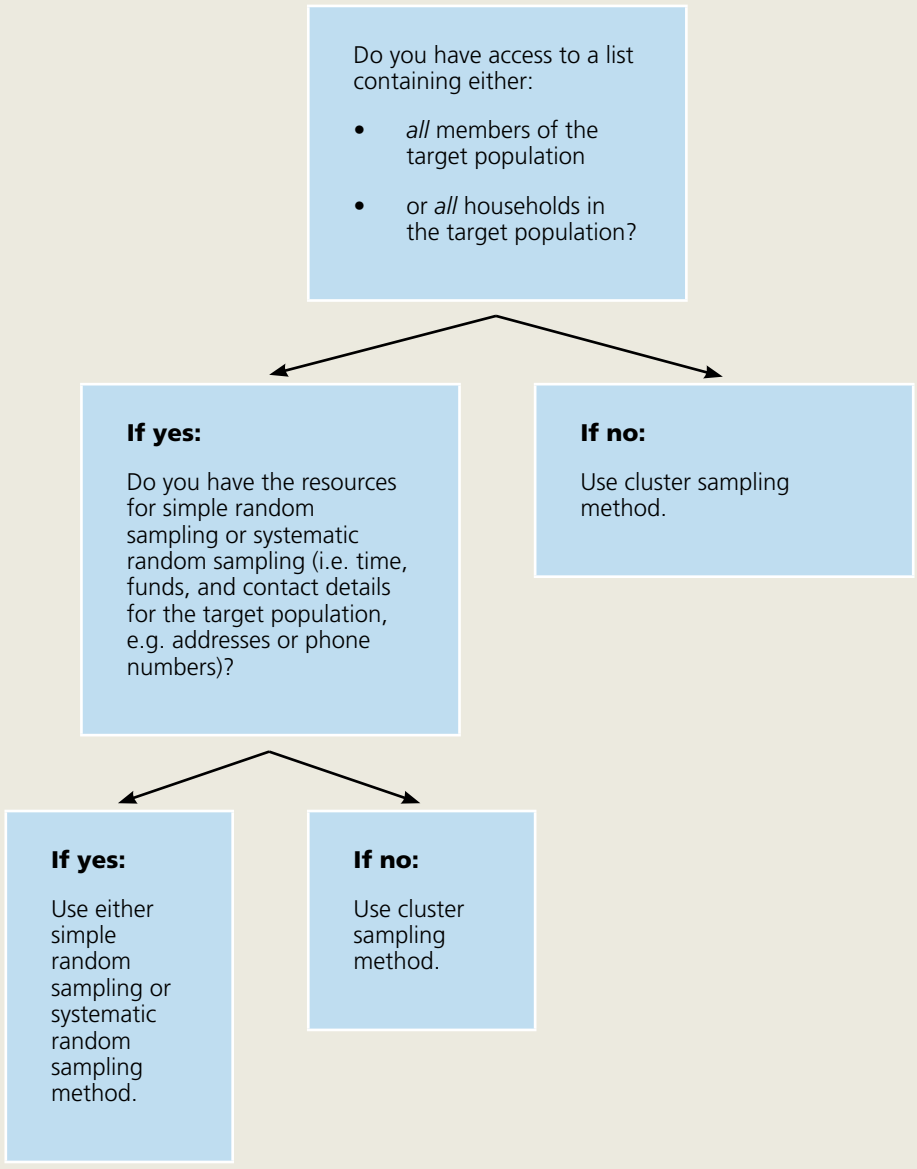
To make up a representative sample, the selection of sampling units (i.e. participants or households) into the study needs to be random. The three most common probability (or random) sampling methods are:

- simple random sampling
- systematic random sampling
- cluster sampling

Simple random sampling and systematic random sampling involve simpler techniques than cluster sampling. However, in humanitarian settings they may often not be possible. A flowchart to determine which sampling method may be most suitable for a HESPER assessment is displayed in Figure 1.

Dacope, Bangladesh, following Cyclone Aila, 2011, © Sandie Walton-Ellery

Figure 1: Flowchart to determine which sampling method to use



See Appendix 4 for a sampling guide, including step-by-step guides for simple random sampling, systematic random sampling, and cluster sampling. As cluster sampling is an advanced sampling technique, it is recommended to consult with an experienced epidemiologist or survey expert when applying this method.

4b. Selecting respondents - Sample size

A sample size calculation should be performed before a HESPER survey is conducted, to estimate the sample size needed to draw conclusions about the level of perceived needs in the population (i.e. to predict the frequency with which each of the HESPER Scale's items is perceived as serious problem (or no serious problem) in the wider target population).

There are many computer programs available which are able to perform such sample size calculations, some of which are accessible on the internet. If you are not familiar with such calculations, it is recommended to seek advice from an experienced statistician or epidemiologist.

Table 4 below gives suggested sample sizes for HESPER surveys. For justifications and further details of these sample size calculations (including worked examples), see Appendix 6.

Table 4: Required sample size for HESPER surveys (to accurately predict the frequency with which each HESPER item is perceived as serious problem in the population)*

	Expected response rate of 70%	**Expected response rate of 80%**	**Expected response rate of 90%**
Simple random sampling or systematic random sampling	137	120	107
Cluster sampling	274	240	213

* Assumptions: Level of precision (*beta*) = 0.1; Risk of error (*alpha*) = .05; Expected prevalence = 50%; Design effect (for cluster sampling) = 2

Should you wish to be able to make statistical comparisons between sub-groups, other calculations will need to be performed to estimate the required sample size. As with the sample size calculations above, sample size calculations for these analyses take into account the expected prevalence or mean, the level of precision, and a value related to the risk of error. In addition, information is needed on the number of sub-groups, as well as an estimate of whether there are likely to be an equal number of respondents in each of the sub-groups. It is likely that a much higher sample size will be required for these analyses.

5. Recruiting interviewers

Before data collection, you will need to recruit interviewers to administer the HESPER Scale. As with all assessments in humanitarian situations, interviewers selected to administer the scale should possess good interpersonal skills. They should have training and skills in basic interviewing and the application of relevant ethical principles, such as understanding the importance of confidentiality and informed consent. It is advisable for interviewers to have had an education of 12 years minimum (i.e. high school diploma or equivalent).

Furthermore, it is important that interviewers are familiar with the local setting within which the assessment is being conducted and that the choice of interviewer is suitable to the local culture. For example, in some cultures it may not be appropriate for a man to interview a woman, or for a younger woman to interview an older woman. Within the same country there may also be different cultural norms between particular groups, for example across different age groups, genders, or people of different religious beliefs. The choice of interviewer should therefore not only be appropriate to the overall population but also to the particular group. If working in another culture, interviewers should also ensure that their behaviour during the interview fits in with the cultural setting within which the interview is being conducted. This includes, for example, dressing according to the cultural norms and acting in a way that is locally acceptable.

Generally, the more interviewers you recruit, the faster data collection can be completed. However, if a large number of interviewers are recruited, it may make it more difficult to adequately train and supervise them. The number of interviewers recruited will therefore depend on the required sample size, the gender balance, as well as on the resources available, for instance the number of field supervisors, time, geographical spread of the sample, and funds. During field-testing of the HESPER Scale, between 6 and 12 interviewers were recruited in each of the three field-testing countries, who together were able to complete between 330 and 385 interviews per country in 12 working days (using 12 interviewers) to 22 working days (using 6 interviewers), including time needed to train interviewers in administering the HESPER Scale. In many humanitarian situations, it may be difficult to conduct more than 2 to 3 interviews per interviewer per working day.

6. Rapid training of interviewers

Interviewers should be trained to use the HESPER Scale by using the interviewers' training manual (see Appendix 2). The training should be conducted in the language spoken by interviewers. At least one whole day (ideally more) should be spent on training, with at least half of this being spent on practice interviews and role plays. Interviewers should also be given sufficient time to read the interviewers' training manual, either during training or in their own time.

In addition to the training session, a pilot-test of at least half a day should be conducted, in which interviewers practice using the HESPER Scale in the field (e.g. interviewing members of the target population). These interviews should be observed by a knowledgeable supervisor. Following the pilot-trial, the supervisor should discuss the interview process with the interviewers, and discuss any problems with them.

During training, it may be useful to inform interviewers of any support structures or services available to respondents. At the end of interviews, they may then pass this information on to those respondents, who seem very upset or distressed by their situation (see section 3.5 in interviewers' training manual).

2.2.2 During interviews – Issues to consider

1. Informed consent

Administration of the HESPER Scale by interviewers to respondents should be preceded by an informed consent process. This is to ensure that respondents take part in the interview voluntarily, without coercion or fear that they will miss out on benefits if they do not participate, and to facilitate that no unrealistic expectations are raised.

Informed consent may be taken either verbally or in writing, depending on the context. At a minimum this should involve explaining to the respondent who the interviewer is and the agency he or she represents, the reasons for the survey, and an overview of the interview process, including the amount of time needed. Furthermore, it should be clarified that participation is anonymous, completely voluntary, that no compensation will be paid, and that there will be no benefits to respondents if they participate. The interviewer should then answer any questions the respondent may have, before asking whether the respondent agrees to take part.

Ideally each respondent should be given a participant information sheet explaining all of the above (which they may either read themselves, or which may be read out to them), and each respondent should sign two copies of this sheet (one for the respondent to keep, one for the interviewer) as consent to take part in the survey. If the respondent does not agree to take part, he or she should not be pressured into doing so. Respondents should also have the right to withdraw from the interview at any point without having to give a reason. See Appendix 8 for an example of a participant information sheet / consent form.

Pinchinat displacement camp, Jacmel, Haiti, 2010, © Maya Semrau

2. Confidentiality

In order to respect respondents' right to privacy, it is important that all their details and responses are kept confidential. This means that respondents' answers or personal details should not be discussed with other people outside of the assessment team. Members of the team should not discuss anything with others, even once the assessment has been completed. Furthermore, all individual data sheets should be kept confidentially, and no information from which the identity of respondents may be identified should be made public. Instead of respondents' names, pre-assigned numbers should be used on data sheets. Any information linking respondents' names with their numbers should be kept separately.

The interview should be conducted in a place which is as private as possible. Ideally this means that the interview should be conducted in a quiet room with only the interviewer and the respondent present. However, this may not always be possible or culturally appropriate.

3. Standardizing interviews

In order for results to be reliable, it is important that interviews are conducted in the same way for each respondent and across different interviewers. Interviewers should be given an equal amount of training, and should be given sufficient time to practice HESPER interviews. Standardizing interviews in this way ensures that any differences in results are not due to differences in the interview process, but are rather due to 'true' differences between respondents.

4. Supervising interviewers

Throughout data collection, interviewers should be supervised by a knowledgeable team leader who has experience of conducting surveys in the field. Supervisors should ideally meet with interviewers at the end of each day, and at least every few days during data collection, to review the interview process, discuss any problems, and to collect data sheets from interviewers.

5. Minimizing non-response

Even though there is usually some non-response in all surveys, non-response should be reduced as much as possible, as a low response rate may bias results. This is because there may be systematic differences between those who choose to participate in a survey, and those who do not (38).

To minimize non-response, if the potential respondent is not in, it may be useful to ask neighbours whether the dwelling is inhabited, and if so, at what time the residents tend to be home. If the dwelling is inhabited, or if this is unknown, two or more visits should be made to establish contact with the residents (38).

If a potential respondent declines to take part, they should not be pressured into taking part.

6. Safety of interviewers and respondents

It is important that both interviewers and respondents remain sufficiently safe throughout the interview and feel comfortable about the setting within which the interview takes place. Interviewers should therefore choose a setting which is safe and culturally appropriate. For example, it may sometimes not be suitable to conduct the interview in respondents' houses or shelters. In this case other arrangements should be made for the interview to take place in a quiet and suitable place. In some situations, it may not be appropriate or safe for women to be interviewed by a male interviewer, or vice versa.

Supervisors or project leaders should always make sure that somebody knows where and when each interview is taking place. If possible, both supervisors and interviewers should carry a mobile phone or, where appropriate, satellite phone with them. Depending on the setting, it may be necessary or advisable to do the interviews in pairs or for interviewers to have an escort with them.

7. Self-care of interviewers

It is possible that interviewers may feel upset or distressed by an interview, or that they find the interview process difficult. Supervisors or project leaders should invite interviewers to speak to them if this is the case or, if available, a staff welfare officer.

2.2.3 During interviews - The interview process from the interviewers' perspective

1. An overview of the HESPER interview process

Each interview should take around 15 to 30 minutes, but this will vary.

HESPER interviews can be summarised into six steps, which are outlined in Box 3.

The HESPER interview process is described in detail in section 2.2 of the interviewers' training manual (see Appendix 2).

Darfur, 2004, © WHO

Box 3

The HESPER interview in six steps from the interviewers' perspective

1. Before the interview: Make sure you are familiar with the HESPER Scale and its rating system. You should have practiced this with your colleagues before your first HESPER assessment.
2. Introduction to the interview: Introduce yourself to the person you are interviewing, explain the purpose of the interview and the interview process, answer any questions they may have, and ask if they agree to take part. If they do agree to take part, make sure that they are comfortable and ready to start the interview. Then write down the date, your name, the participant number, the location in which the person lives, as well as the person's gender and age at the top of the HESPER form.
3. HESPER Scale – Need ratings: Read out the text at the top of the HESPER form. Then ask questions about each of the HESPER Scale's problem areas and give each question a rating based on the person's answers. Write the ratings in the appropriate column as you go along. Ask one or more follow-up questions for each area if necessary to make sure that you understand the person's views correctly.
4. HESPER Scale – Other serious problems: Once you have rated each of the HESPER Scale's problem areas, ask the person whether they have any other serious problems and write these down in the assigned spaces at the bottom of the HESPER form.
5. HESPER Scale – Priority ratings for serious problems: Then ask the person to tell you their three most serious problems in order of importance and write these down in the assigned spaces at the bottom of the HESPER form.
6. End of interview: Thank the person for taking part in the interview, answer any questions they have, and make sure that they have your or your organisation's contact details.

2. Making ratings on the HESPER Scale

A HESPER interview involves asking respondents about 26 problem areas. Interviewers rate whether the person feels that they have a serious problem in that particular area based on the person's answers.

Each question is rated in the same way. The interviewer asks respondents about each problem area and makes a rating based on their answers. See Box 4 for an explanation of the HESPER Scale's rating system.

Box 4

Each question is rated according to the following guidelines

Rate 9 (does not know / not applicable / declines to answer) if the person does not know how to answer the question, does not want to answer the question, or if the question does not apply to them.

Rate 1 (serious problem) if the person thinks that there is a serious problem for this question. A serious problem is a problem which the person feels is serious (however they define this).

Rate 0 (no serious problem) if the person does not think that there is a serious problem for this question.

2.2.4 After interviews

1. Data entry

Data should be entered and analysed in a statistics programme. Data should at a minimum be double-checked, and ideally should be entered twice and then both data sets cross-checked, to ensure that the data have been entered correctly. If this is not feasible, then a randomly selected percentage (e.g. 20%) of the data should be re-entered or double-checked, to ensure that the data has been accurately entered.

The data should then be assessed for their quality by checking for *outliers*, *inconsistencies*, and *missing data*. An *outlier* is a data point, which seemingly does not fit in with the remainder of the data set, that is it lies outside the range of all other data. For instance, if all respondents rated between 2 and 10 of the HESPER items as serious problem, but one respondent rated all 26 items as serious problem, this data point would be an outlier.

Inconsistencies in the data may arise where two data points for one respondent are not compatible with each other. An example of this may be that one of the HESPER items was not rated as serious problem by the respondent, but was then mistakenly coded as a priority rating (i.e. was rated as one of the respondent's three most serious problems). Another example may be that a respondent apparently has two children, even though he or she is not married (in cultures where this is a taboo). When dealing with outliers or inconsistencies in the data set, re-check the electronic data against the original data sheets or re-interview the person, to ensure that the data are correct.

There are various ways to deal with *missing data* (some more complex than others). One of the simplest approaches (if the number of missing values is low, under around 20%, and there does not appear to be any patterns in the missing data) is to impute values by the taking the average value across other respondents. Other more complex methods should be applied if the number of missing values is high (over around 20%), or there appears to be a pattern in the missing data (e.g. a particular item is missing more than others, or one group of respondents has more missing items than another group). Should this be the case, it is recommended to seek advice from an experienced statistician or epidemiologist.

2. Data analyses

Quantitative statistical methods are required to derive population-based results for HESPER surveys. All statistical analyses can be performed by standard statistics programmes.

<u>Need ratings of individual HESPER items</u>

The formula to calculate prevalence (P) of need ratings for individual HESPER items, expressed as percentage, is:

P (%) = number of respondents who rated the HESPER item as serious problem (or alternatively no serious problem) / number of respondents interviewed x 100

Other serious problems

To derive results for any other serious problems (i.e. needs) named by respondents, these should be listed. Where appropriate, similar items may be grouped together. Prevalence of reported other serious problems may then be calculated according to the formula above at the bottom of page 28.

Priority ratings for serious problems

The formula to calculate prevalence (P) of priority ratings for individual HESPER items, expressed as percentage, is:

P (%) = number of respondents who rated the HESPER item as one of their three most serious problems / number of respondents interviewed x 100

or (where priority ratings are separated in the analyses):

P (%) = number of people who rated the HESPER item as either their first, second, or third most serious problem / number of respondents interviewed x 100

Total number of needs

In addition to being able to calculate the prevalence of individual problem areas in the sample, the HESPER Scale also allows the average total number of needs (or serious problems) that respondents have to be calculated. As long as data are normally distributed, the mean is the most appropriate measure of the average. For data to be normally distributed, they should form a bell-shaped curve when being displayed as histogram, and the mean, median, and mode (all measures of the average) should have roughly the same (or similar) values. Means should always be displayed together with their standard deviation.

If data are not normally distributed, then the median may be a better measure of the average. The median is the number which divides the set of numbers equally into a lower and an upper half, i.e. it is the half-way point of all numbers. The median is usually presented together with the range (i.e. the range between the minimum and maximum numbers).

Confidence intervals

Confidence intervals may be calculated for both the prevalence (i.e. percentages) of need ratings and priority ratings (for individual HESPER items), as well as for averages (e.g. means) of total number of needs. Though it is not necessary to calculate confidence intervals, they can be a useful way to communicate results. See Appendix 7 for the formulae to calculate confidence intervals.

Disaggregating results according to sub-populations

To disaggregate results according to sub-populations (e.g. different genders, different age groups, people living in different geographical areas etc.), the sample may be divided according to the particular sub-population, and then the analyses performed for each sub-population in the same way as for the entire

sample. For example, if comparing results between men and women, either prevalence of need ratings or priority ratings, or the average (e.g. mean) total number of needs, may be calculated separately for men and women.

Statistical tests may be used to calculate whether any differences in ratings between groups are statistically significant. These include chi-squared tests (for categorical data, such as prevalence), or independent t-tests or ANOVA (for continuous data, such as means). Standard statistics programmes are able to perform these tests.

3. Presenting data

Tables and graphs may be useful for displaying HESPER data. Graphs which may be useful include pie charts or bar charts (for need ratings or priority ratings of individual HESPER items), or histograms (for total number of needs). Standard statistics programmes are able to create these (see Appendix 3 for an example of how to present data in a report of a HESPER assessment).

4. Identifying potential errors and biases in the results

As HESPER surveys provide population-level data, they may give a good indication of the prevalence of need, and the types of needs, present in a population. However, as with all surveys, results should be interpreted cautiously, as there is always the possibility of results being somewhat compromised by errors. Possible reasons for error should therefore be considered carefully. Generally, there are two types of error: random error and systematic error (i.e. bias). It is important to discuss relevant errors and biases in any report on a HESPER assessment.

Random error is "when a value of the sample measurement diverges – due to chance alone – from that of the true population value" (Bonita et al 2006, p. 52 (39)). In other words, the results are not representative of the population at large because of some chance factor. Two common types of random error are (39):

- Sampling error: This, as well as error due to variations between different respondents, may have occurred when the sample was too small (see section 2.2.1 – 4b).
- Measurement error: This may have occurred if the measures used were inaccurate in a non-systematic way. As the HESPER Scale has good psychometric properties (i.e. it has been shown to be reliable and valid in three field-settings), this goes some way in reducing measurement error. Yet, if the HESPER Scale is used in a new setting without a local study verifying its psychometric properties, then the possibility of measurement error should be acknowledged.

Systematic error occurs when "results differ in a systematic manner from the true values" (Bonita et al 2006, p. 53 (39)). In other words, the results are not representative of the population at large because of some factor in the sample which systematically deviates from that in the population at large. The two main types of systematic error are (39):

- Selection bias: This may have occurred if not all people in the target population had an equal chance of being selected into the study, for instance because non-probability sampling methods were used or because some mistake was made during sampling (see section 2.2.1 – 4a).
- Measurement bias: This may have occurred where the measurements used were systematically inaccurate. One type of measurement bias results from response sets where the respondent believes that it is better to over-estimate or under-estimate the seriousness of their needs, for example because respondents have raised expectations of the help they will receive (see section 3.3 in interviewers' training manual). Triangulating results with other methods (e.g. in-depth key informant interviews) may be necessary to identify such biases. Another type of measurement bias can result from observer bias, in which the interviewer influences the ratings made. For example, if interviewers believed that respondents over-estimated their serious problems, this may have influenced the way they made ratings. This may have occurred if interviewers were trained insufficiently (see section 2.2.1 – 6).

5. Communicating results to relevant stakeholders

The results of any HESPER assessment should be communicated to all relevant stakeholders in plain language. This may be done through a report which is disseminated to stakeholder groups (including members of the affected population). An example of such a report can be found in Appendix 3.

6. Conducting follow-up in-depth assessments

The HESPER Scale on its own is not sufficient to fully understand people's perceived needs. HESPER surveys should therefore be followed-up and triangulated with in-depth key informant interviews (e.g. with community leaders, traditional and religious healers, humanitarian workers), in-depth interviews with the affected population, observation, mapping exercises, or focus group discussions, to better understand the specifics of why – from the respondents' perspectives – needs are rated as they are.

7. Encouraging stakeholders to address prioritized needs

These in-depth qualitative assessments following HESPER surveys may be used to identify and develop suitable interventions to address needs as perceived by the affected population. Stakeholders should be encouraged to address these. Appropriate questions should be asked during key informant interviews or focus group discussions, to identify what resources and interventions are considered suitable or useful from the perspective of the affected population.

8. Monitoring perceived needs over time

Use of the HESPER Scale at one time point is not sufficient to understand the complexities of population needs. Needs assessments should be viewed and contextualised within the specific timeframe within which they are conducted; for this the HESPER Scale may be used repeatedly over time to identify shifts and trends in perceived needs and to assess whether prioritized needs are addressed over time.

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Appendices

Appendix 1 - Humanitarian Emergency Settings Perceived Needs Scale (HESPER)

Date:	Interviewer name:	Participant number:
Location (name of city, village or camp):	Gender:	Age:

Rating: 0 = no serious problem 1 = serious problem 9 = does not know / not applicable / declines to answer	Ratings

I am going to ask you about the **serious problems** that you may **currently** be experiencing. We are interested in finding out what you think – a serious problem is a problem that **you** consider serious. There are no right or wrong answers. I am going to ask you about your own serious problems first.

1. Drinking water Do you have a serious problem because you do not have enough water that is safe for drinking or cooking?	
2. Food Do you have a serious problem with food? For example, because you do not have enough food, or good enough food, or because you are not able to cook food.	
3. Place to live in Do you have a serious problem because you do not have a suitable place to live in?	
4. Toilets Do you have a serious problem because you do not have easy and safe access to a clean toilet?	
5. Keeping clean *For men:* Do you have a serious problem because in your situation it is difficult to keep clean? For example, because you do not have enough soap, water or a suitable place to wash. *For women:* Do you have a serious problem because in your situation it is difficult to keep clean? For example, because you do not have enough soap, sanitary materials, water or a suitable place to wash.	
6. Clothes, shoes, bedding or blankets Do you have a serious problem because you do not have enough, or good enough, clothes, shoes, bedding or blankets?	
7. Income or livelihood Do you have a serious problem because you do not have enough income, money or resources to live?	
8. Physical health Do you have a serious problem with your physical health? For example, because you have a physical illness, injury or disability.	
9. Health care *For men:* Do you have a serious problem because you are not able to get adequate health care for yourself? For example, treatment or medicines. *For women:* Do you have a serious problem because you are not able to get adequate health care for yourself? For example, treatment or medicines, or health care during pregnancy or childbirth.	
10. Distress Do you have a serious problem because you feel very distressed? For example, very upset, sad, worried, scared, or angry.	
11. Safety Do you have a serious problem because you or your family are not safe or protected where you live now? For example, because of conflict, violence or crime in your community, city or village.	
12. Education for your children Do you have a serious problem because your children are not in school, or are not getting a good enough education?	
13. Care for family members Do you have a serious problem because in your situation it is difficult to care for family members who live with you? For example, young children in your family, or family members who are elderly, physically or mentally ill, or disabled.	
14. Support from others Do you have a serious problem because you are not getting enough support from people in your community? For example, emotional support or practical help.	
15. Separation from family members Do you have a serious problem because you are separated from family members?	
16. Being displaced from home Do you have a serious problem because you have been displaced from your home country, city or village?	

Interviewers should be trained in the HESPER before use (see Appendix 2 of the HESPER manual).

17. Information *For displaced people:* Do you have a serious problem because you do not have enough information? For example, because you do not have enough information about the aid that is available; or because you do not have enough information about what is happening in your home country or home town. *For non-displaced people:* Do you have a serious problem because you do not have enough information? For example, because you do not have enough information about the aid that is available.	
18. The way aid is provided Do you have a serious problem because of inadequate aid? For example, because you do not have fair access to the aid that is available, or because aid agencies are working on their own without involvement from people in your community.	
19. Respect Do you have a serious problem because you do not feel respected or you feel humiliated? For example, because of the situation you are living in, or because of the way people treat you.	
20. Moving between places Do you have a serious problem because you are not able to move between places? For example, going to another village or town.	
21. Too much free time Do you have a serious problem because you have too much free time in the day?	

The last few questions refer to people in your community*, so please think about members of your community when answering these questions.

22. Law and justice in your community Is there a serious problem in your community because of an inadequate system for law and justice, or because people do not know enough about their legal rights?	
23. Safety or protection from violence for women in your community Is there a serious problem for women in your community because of physical or sexual violence towards them, either in the community or in their homes?	
24. Alcohol or drug use in your community Is there a serious problem in your community because people drink a lot of alcohol, or use harmful drugs?	
25. Mental illness in your community Is there a serious problem in your community because people have a mental illness?	
26. Care for people in your community who are on their own Is there a serious problem in your community because there is not enough care for people who are on their own? For example, care for unaccompanied children, widows or elderly people, or unaccompanied people who have a physical or mental illness, or disability.	

Other serious problems:

Do you have any other serious problems that I have not yet asked you about? Write down the person's answers. 27.
28.
29.

Priority ratings for serious problems:

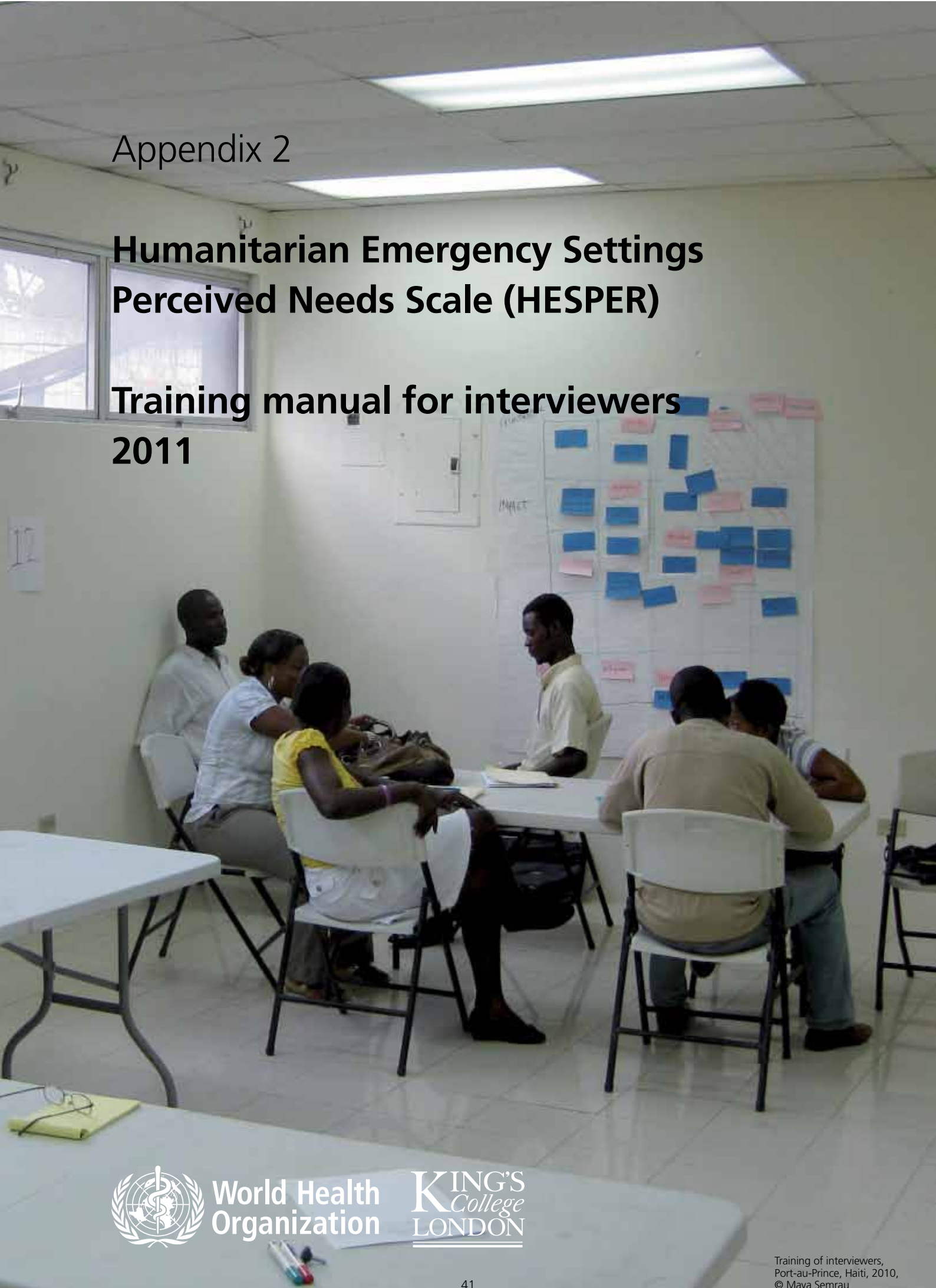
Read out the titles of all questions you have rated as '1', as well as any other serious problems listed above. Write down the person's answers (write down the number and title of the questions). 1. Out of these problems, which one is the most serious problem?
2. Which one is the second most serious problem?
3. Which one is the third most serious problem?

* Throughout the HESPER form, the term 'community' should be replaced with the term that is most suitable to the local geographical area (for example village, town, neighbourhood, camp and so on).

Appendix 2

Humanitarian Emergency Settings Perceived Needs Scale (HESPER)

Training manual for interviewers 2011



World Health Organization

KING'S College LONDON

Training of interviewers, Port-au-Prince, Haiti, 2010, © Maya Semrau

Overview

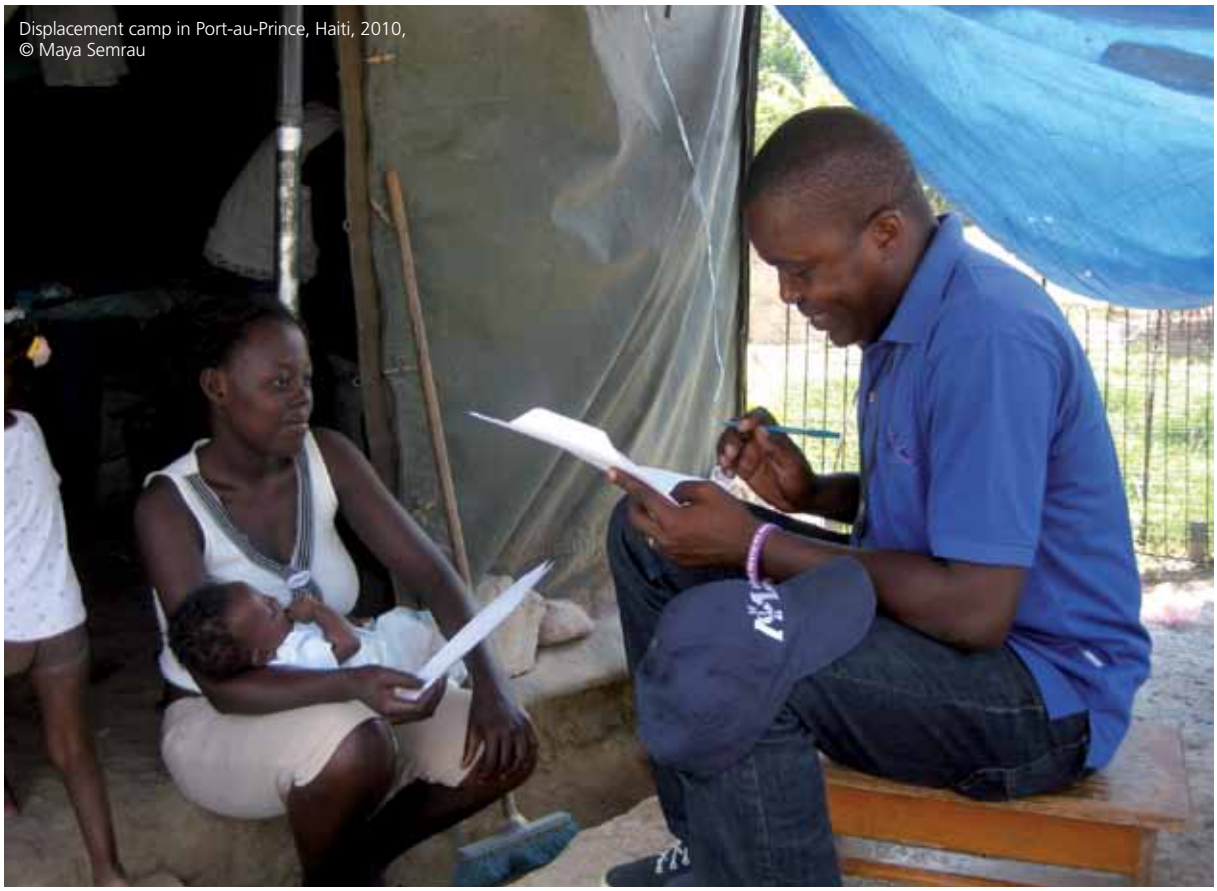
This training manual explains how to use the HESPER Scale. It is written for interviewers or team leaders who would like to learn how to carry out a successful HESPER assessment. We recommend that you have this training manual with you during HESPER interviews.

Chapter 1 includes an introduction to the HESPER Scale and its rating system.

Chapter 2 provides an explanation of the whole HESPER assessment process. Chapters 2.1 and 2.2 contain the same information, but in different levels of detail – 2.1 gives a brief overview, and 2.2 provides a detailed explanation of the whole HESPER process. Section 2.2 is the most important section and you should read it thoroughly at least once before your first HESPER assessment. Section 2.3 provides further explanations for some of the HESPER questions.

Chapter 3 highlights various other things that are important to consider during a HESPER interview.

Chapter 4 provides examples to practice your HESPER interviewing skills.



Displacement camp in Port-au-Prince, Haiti, 2010,
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1.1 INTRODUCTION TO THE HESPER SCALE

There are many ways in which to assess people's needs. One way is to assess people's 'perceived needs'. These are needs which are felt or expressed by people themselves, and are problem areas they would like help with.

The Humanitarian Emergency Settings Perceived Needs Scale (HESPER) aims to provide a quick and reliable way of assessing the perceived serious needs of people affected by large-scale humanitarian emergencies such as war, conflict or major natural disaster.

The HESPER Scale assesses a wide range of social, psychological and physical problem areas. However, it does not provide an answer as to whether, or how to, offer help. It simply aims to identify those serious problems that are common in a population. These problems should then be assessed and addressed in more detail.

The HESPER Scale was developed by the World Health Organization in Geneva and King's College London to fill several gaps in the humanitarian field. We hope that it will enable needs assessments to be based directly on the views of people affected by humanitarian emergencies, and will help to provide a more accurate picture of the serious problems which the people affected by an emergency want help with. The opinions of many different people were collected whilst developing the HESPER Scale, including humanitarian experts, aid workers, refugees, and other local populations affected by humanitarian emergencies.

1.2 WHO IS SUITABLE AS AN INTERVIEWER?

It is important that interviewers are familiar with the local setting in which they are carrying out the assessment, and that the choice of interviewer is suitable to the local culture. For example, in some cultures it may be not be appropriate for a man to interview a woman, or for a younger woman to interview an older woman. Within the same country there may also be different cultural norms between particular groups, for example across different age groups, genders, or people of different religious beliefs. The choice of interviewer should be appropriate to the overall population and also to the particular group. If working in another culture, interviewers should make sure that their behaviour during the interview fits in with the cultural setting in which they are carrying out the interview. This includes, for example, dressing according to the cultural norms and acting in a way that is locally acceptable. Also, interviewers need to be good at communicating with other people and should have good basic interviewing skills, as well as some knowledge of ethical principles, such as understanding the importance of confidentiality and making sure that the person they are

interviewing agrees to take part. We also recommend that interviewers have had an education of at least 12 years (that is, they have a high school diploma or equivalent).

As the interviewer, it is important that you are comfortable about doing the assessment. If you feel that you do not fit the criteria described above, or you feel uncomfortable about carrying out interviews after reading this manual, please let your project leader or supervisor know.

1.3 RATING THE HESPER SCALE

A HESPER assessment involves asking the person you are interviewing about 26 problem areas. You will rate whether the person feels that they have a serious problem in that particular area based on the answers they give. Before explaining the assessment process in more detail, it is important to understand how to make ratings on the HESPER Scale.

You should rate each question in the same way. You will ask the person about each problem area and give each question a rating based on their answers. See Box 1 for an explanation of the HESPER Scale's rating system.

Box 1

You should rate each question according to the following guidelines

Rate 9 (does not know / not applicable / declines to answer) if the person does not know how to answer the question, does not want to answer the question, or if the question does not apply to them.

Rate 1 (serious problem) if the person thinks that there is a serious problem for this question. A serious problem is a problem which the person feels is serious (however they define this).

Rate 0 (no serious problem) if the person does not think that there is a serious problem for this question.

Darfur, 2004, © WHO

2. The HESPER interview

2.1 OVERVIEW OF THE HESPER INTERVIEW

Each interview should take around 15 to 30 minutes, but this will vary.

There are six steps to each HESPER interview. These are outlined in Box 2 below.

Box 2

The six steps of a HESPER interview

1. **Before the interview:** Make sure you are familiar with the HESPER Scale and its rating system. You should have practiced this with your colleagues before your first HESPER assessment.
2. **Introduction to the interview:** Introduce yourself to the person you are interviewing, explain the purpose of the interview and the interview process, answer any questions they may have, and ask if they agree to take part. If they do agree to take part, make sure that they are comfortable and ready to start the interview (see Box 3 on page 47 for examples). Then write down the date, your name, the participant number, the location in which the person lives, as well as the person's gender and age at the top of the HESPER form.
3. **HESPER Scale – Need ratings:** Read out the text at the top of the HESPER form. Then ask questions about each of the HESPER Scale's problem areas and give each question a rating based on the person's answers (see Box 4 on page 48). Write the ratings in the appropriate column as you go along. Ask one or more follow-up questions for each area if necessary to make sure that you understand the person's views correctly.
4. **HESPER Scale – Other serious problems:** Once you have rated each of the HESPER Scale's problem areas, ask the person whether they have any other serious problems and write these down in the assigned spaces at the bottom of the HESPER form.
5. **HESPER Scale – Priority ratings for serious problems:** Then ask the person to tell you their three most serious problems in order of importance and write these down in the assigned spaces at the bottom of the HESPER form (see Box 6 on page 50 for an example).
6. **End of interview:** Thank the person for taking part in the interview, answer any questions they have, and make sure that they have your or your organisation's contact details (see Box 7 on page 51 for an example).

2.2 THE HESPER ASSESSMENT PROCESS IN DETAIL

The same six steps are now explained in more detail.

1. Before the interview

It is important that you are familiar with the HESPER Scale and its rating system before you start an assessment. Before your first assessment, take the time to practice carrying out interviews and making ratings. It may be a good idea to do this together with another interviewer using role plays

(see sections 4.3 and 4.4 on pages 65 to 69). After you do a number of role plays, an experienced or knowledgeable supervisor should watch while you do another one. If you still feel unsure about anything afterwards, please ask your project leader or supervisor. It is a good idea for your supervisor to watch your first few 'real' interviews, if possible.

2. Introduction to the interview

During interviews, you should first introduce yourself to the person you are interviewing (give your name and say who you work for), explain the reasons for the interview, the interview process (including how long it will take), answer any questions the person may have, and ask whether they agree to take part. You should explain that participation is anonymous, completely voluntary, and that the person will receive no compensation or other benefits for taking part. Your supervisor or project leader may give you a participant information sheet to read out to the person you are interviewing that covers all these topics.

It is important that the person is comfortable and agrees to take part in the assessment. You should not pressurize the person into taking part. The person is free to choose whether or not to take part and they can end the interview at any point.

Throughout the assessment it is important to be friendly and respectful towards the person. This will help them to feel comfortable and give honest answers to your questions. You should also make sure that the person is comfortable with the place in which the assessment is being carried out. If possible, this should be somewhere private so that other people cannot overhear the interview. See Box 3 for examples of things you could say to make sure that the person feels comfortable before starting the interview.

Box 3

Examples of things to say to make sure the person feels comfortable

"Are you okay?" (or a cultural equivalent)

"Thank you for making time for me."

"Would you like some water?" (if the interview does not take place at the person's home)

"Are you ready to start the interview?"

Only go ahead with the interview (steps 3 to 6) if the person agrees to take part. You should write the date, your name, the location in which the person lives, as well as the person's gender and age at the top of the HESPER form. You should not write the person's name on the form but should use a pre-assigned participant number instead. You should have a separate sheet of paper which links the person's name with their participant number.

3. HESPER Scale – Need ratings

After reading out the text at the top of the HESPER form, rate each of the HESPER Scale's problem areas individually. You should go through the HESPER Scale and ask each question one after another. Write your ratings on the HESPER form for each question based on the person's answers. **It is important that you make a rating for each question on the HESPER form.**

You should assess each of the HESPER Scale's questions in the same way. You should make a rating for each question based on the person's answers according to the guidelines in Box 1 on page 45.

It is important that you read out the whole question to the person for each problem area. You do not need to read out the titles of the questions. If the person feels that there is a serious problem with any of the things mentioned in the question, you should rate it as '1' (serious problem).

Remember that you are rating the questions according to whether the person perceives there to be a *serious* problem (however they define this).

It is also important that you rate each question according to what the person feels their serious problems are, and not what you think their serious problems are. You should record the person's views, even if you disagree with them. You should not let the person know if you disagree with them.

See Box 4 for an example of how to ask questions for each problem area and how to make ratings based on the person's answers. Please remember that this is a simplified example. Often, the person will not answer in such a clear-cut way. Although one question may be enough, you may sometimes have to ask more questions to be able to make a rating (see Chapter 4 for practice examples). You should try to keep your questions simple. It is also important that you understand the person's answers correctly. If you are not sure, ask them to explain their answer further. Listen carefully to what the person wants to say and make ratings based on this.

Box 4

Example of how to ask questions for each problem area

Interviewer: "Do you have a serious problem because you do not have a suitable place to live in?" (question 3)

Person being interviewed: "Yes." (rate as 1 = serious problem)

"No." (rate as 0 = no serious problem)

See Box 5 for tips on good interviewing techniques, which you should use during HESPER assessments.

Box 5

Tips for good interviewing techniques

Be familiar with the HESPER Scale before you carry out an assessment. This will make you more confident and comfortable.

Interviewer's attitude

- Be warm and understanding towards the person you are interviewing. This means showing the person that you are listening, and responding to what they say in a kind and friendly way. You can say things like "That's great!", "I'm sorry!", "That's a shame!" or "I see!" to let the person know that you are listening and that you care about their situation. However, be careful not to make them believe that you will be able to help them with their situation.
- Let the person give you their opinion fully.
- Sometimes it may be useful to repeat the person's answers to them in your own words before making a rating, to make sure that you have understood them correctly. For example, you could say: "So, have I understood you correctly? Are you saying…?" This also shows the person that you are listening.
- It is possible that people you are interviewing may be angry or upset about their situation. Be understanding and kind.

Verbal skills

- Speak slowly and clearly to make sure that the person understands you.
- Use a pleasant and friendly voice.
- Leave many pauses and silences between questions. This gives the person the opportunity to think about their answers and to give you their opinion.

Phrasing questions

- Keep your questions simple and clear.
- If the person is not giving you a clear answer, try phrasing the question in a different way.
- It is okay to check with a person if their answer is not clear. For example, if you feel that the person is trying to say that they do not have a serious problem with 'Food' (question 2), but is not being clear about this, you could say: "So am I understanding correctly that you do not have a serious problem with food?"
- Sometimes using multiple choice questions can also be useful if the person is not giving a clear answer. For example, for the question 'The way aid is provided' (question 18), if the person has told you that some people are getting more aid than others, you could ask: "So is this a serious problem for you that some people are getting more aid than others, or is it not a serious problem?"

Handling diversions

- If the person gives very long or irrelevant answers, you can say something like: "That is very interesting. However, there are many more questions I have to ask, so would it be okay to please move on to those?" Or you could say: "We can talk about that some more after the interview, if you would like to."
- If the person starts asking for advice, information or your own personal experiences, you could say: "We are really interested to find out about your experiences and perceptions." Or you could say: "We can talk about that after the interview."

Handling distress *(also see section 3.5 on page 56)*

- If the person gets a little upset at any point during the assessment, slow down and take a short break if necessary. Ask the person whether they are okay to continue with the interview and stop the interview if they want to.
- Do not keep asking questions or challenge the person too much about sensitive or difficult subjects. If the person is getting very upset by a topic, it may be a good idea to close the interview booklet and be silent until they calm down. You could then say: "You seem very upset. Are you okay to continue with the interview, or would you prefer to stop?"
- Remember that the person can choose not to answer a question if they do not want to.

4. HESPER Scale – Other serious problems

After you have rated each problem area listed on the HESPER Scale, ask the person: "Do you have any other serious problems that I have not yet asked you about?" If the person has one or more other serious problems, write these down in the assigned spaces at the bottom of the form. You can ask the person to tell you up to three other serious problems.

5. HESPER Scale – Priority ratings for serious problems

You should then ask the person to tell you their three most serious problems (in order of priority).

Read out all the titles of the problem areas which the person has rated as 'serious problem' ('1' ratings), as well as any other serious problems listed under the 'Other serious problems' section. Then ask the person to list their three most serious problems in their order of importance, and write their answers in the assigned spaces. You should write down both the question number and title of the problem area. See Box 6 for an example of how to ask the person to prioritise their serious problems.

If the person has only told you that two problem areas are 'serious problems' ('1' ratings), ask them to rate those two problems in their order of importance. If the person has only told you about one (or no) serious problem, you do not need to fill in the 'Priority ratings' section as it is obvious that this problem is the most serious problem.

Box 6

Example of how to make priority ratings

Interviewer: "I am now going to read out all the problem areas which you have told me you have a serious problem with. I would like you to tell me which of these are your three most serious problems."

Read out all the areas which the person has told you they have a serious problem with (that is, all the questions you have rated as '1'), as well as any serious problems listed under the 'Other serious problems' section on the HESPER Scale (if this applies).

Then say: "Out of these problems, which one is the most serious problem?"

Person being interviewed: "Not having adequate health care." (question 9)

Interviewer: Write '9 - Health care' in the assigned space.

"Which one is the second most serious problem?"

Person being interviewed: "Not having a suitable place to live in." (question 3)

Interviewer: Write '3 - Place to live in' in the assigned space.

"Which one is the third most serious problem?"

Person being interviewed: Tells you a problem listed under the 'Other serious problems' section.

Interviewer: Write the problem listed under the 'Other serious problems' section in the assigned 'Priority ratings' space.

6. End of interview

At the end of the interview, thank the person for taking part, and ask whether they have any more questions or concerns. Take your time answering any questions before you leave and make sure that the person has got your organisation's or the project leader's contact details. See Box 7 for an example of how to end the interview.

Box 7

Example of how to end a HESPER interview

"Thank you very much for taking part in this interview. I hope it was okay for you. I will now pass your answers on to (insert name of organisation) together with the answers of many other people from your community. We will not give your name to anybody and we will keep your answers safe and secure. As I mentioned before the interview, we are doing the assessment to find out what serious problems people in this community are facing. Have you got any more questions at this point?"

"If you have any questions about this interview at any time in the future, please contact (insert the name of a person and organisation). Thank you again for taking part."

2.3 EXPLANATIONS FOR INDIVIDUAL HESPER QUESTIONS

In this section we explain some of the questions in the HESPER Scale. You may find this section useful if a person you are interviewing asks you to explain a question further, or if you are finding it difficult to decide on the correct rating for a question. You may use these explanations when a person asks you to explain a question – you should not offer your own interpretations. However, these explanations are not meant to be read out to every person you interview.

Some questions are about people's individual problems (for example, 'Drinking water' (question 1) and 'Food' (question 2)), while some are about the person's whole community (for example, 'Alcohol or drug use in your community' (question 24) and 'Mental illness in your community' (question 25)).

1. Drinking water

This question includes any water that is used either for drinking or for cooking. For example, this may include drinking water from taps in the person's home, water from shared taps, or bottled water. The question does not include water for washing (this is included under 'Keeping clean' (question 5)).

2. Food

This question is about whether the person has enough food, and also whether they have food that is appropriate and suitable to their needs. It also includes having suitable equipment and facilities to cook food, for example a stove, firewood, pots or pans.

3. Place to live in

This question may include a temporary or permanent house, hut, tent, or any other kind of shelter.

4. Toilets

This question refers to the toilet (or toilets) that the person uses on a regular basis. If they have a toilet in their home, this may refer to that toilet. If the person uses shared toilets (for instance in a camp setting), this may refer to the shared toilets.

5. Keeping clean

You should read out different questions for men and women. The question for women includes sanitary materials, whereas the question for men does not.

7. Income or livelihood

This question may include a wide range of problems to do with the person's livelihood, for example lack of income from employment, lack of access to farm land, lack of tools for farming, lack of boats or nets for fishing, or lack of access to other resources on which their livelihood depends.

8. Physical health

This question may include any kind of physical illnesses or injuries, including physical disabilities.

9. Health care

You should read out different questions for men and women. Any kind of health care is included, for example hospital treatment, access to a doctor or nurse, access to medications, and sexual health care (including access to contraceptives). The question for women also includes access to support and health care during pregnancy and childbirth.

11. Safety

This question may refer to any serious problem that the person has with safety or security. This could include if they do not feel safe because of crime, conflict, war, violence, the political situation, or any other kind of instability. The question asks about the person's family, so it includes their children, husband or wife, or other family members.

12. Education for your children

If the person has already told you at the beginning of the interview that they do not have any children, you do not need to ask this question and can give a rating of 'not applicable' (9). If the person only has children who are not of school age (that is, they are either too old or too young to go to school), you should also rate the question as 'not applicable' (9).

14. Support from others

This question refers both to emotional and practical support. Practical support may include financial help, help with daily living, help with transport, help with babysitting, or any other kind of practical help. Emotional support is any support offered by another person that helps the person you are interviewing deal with any difficult emotions they may experience. For example, this may include someone talking to the person about their problems, or someone showing that they care about the person's difficulties.

15. Separation from family members

This may include, for example, if the person is separated from their family members because they (or their family) have been forced to leave their home, the person does not know where one or more of their family members are, a family member is missing, or the person is not able to leave the place where they are living to visit family members.

16. Being displaced from home

This question refers to any serious problem that the person is having because they have been displaced from their home country, or home city or village. If the person has already told you that they have not been displaced from home, you do not need to ask this question, and can rate the question as 'not applicable' (9). You should rate the question as 'serious problem' (1) if the person feels that they have a serious problem because they have had to leave their home environment. You should rate it as 'no serious problem' (0) if the person feels that they do not have a serious problem because of this. Please remember that you are not rating whether the person has been displaced from home, but rather whether they feel they have a serious problem because they have had to leave their home. It is therefore possible that the person has had to leave their home, but does not feel that this is a serious problem (you would then give a rating of '0').

17. Information

You should read out different questions for people who have been displaced from home and people who have not been displaced from home.

18. The way aid is provided

It is important to remember that you are assessing whether the person thinks that there is a serious problem in this area. You should rate the question as 'no serious problem' (0) if the person feels that aid is being, or has been, handed out fairly, and that aid agencies are involving the community in the aid process. You should also rate this question as 'no serious problem' (0) if the person does not have fair access to aid, or the community is not involved in the aid process, but the person does not see this as a serious problem.

19. Respect

This question includes any disrespect or humiliation felt by the person, for example because of aid workers, people in the person's community or family, or the situation in which the person lives.

20. Moving between places

This may include serious problems with moving between places because of problems with transport, because the person thinks that moving between places is unsafe, or because they have physical problems that stop them from moving around.

24. Alcohol or drug use in your community

This question may include harmful drugs that can be bought from pharmacies or other shops, as well as illegal drugs.

25. Mental illness in your community

This question may refer to any mental illnesses or mental health problems that people in the community are experiencing. It is important to remember that you are not assessing whether these mental illnesses exist in the community, but rather whether the person feels there is a serious problem in the community because people have a mental illness (however the person defines this). For example, if the person thinks that many people in the community have a mental illness, but does not think that this is a serious problem, you should rate the question as 'no serious problem' (0). However, if the person thinks that people in the community have a mental illness, and thinks that this is a serious problem, you should rate the question as 'serious problem' (1).

Displaced persons camp in Mogadishu, Somalia, 2000/2001, © WHO

3. Other things to consider

3.1 SAFETY

It is important that both you and the person you are interviewing are safe throughout the interview and feel comfortable about the place in which the interview is being held. You should choose a setting which is safe and culturally appropriate. For example, it may sometimes not be suitable to do the interview in the person's house or shelter. In this case arrangements should be made for the interview to take place in a quiet and suitable place. Always make sure that somebody knows where and when you are doing an interview. If possible, carry a mobile phone or satellite phone with you. Depending on the situation, it may sometimes be necessary or advisable to do the interviews in pairs or to have someone else with you.

3.2 CONFIDENTIALITY

In order to respect the person's right to privacy, it is important that you keep their details and answers confidential. This means that you should not show or discuss their answers or personal details with other people outside the assessment team. You should not discuss anything with others, even after the assessment has been carried out. You should do the interview in a place which is as private as possible. Ideally this means that the interview should be in a quiet room with only the interviewer and the person being interviewed present. However, this may not always be possible or culturally appropriate.

3.3 AVOIDING RAISED EXPECTATIONS

Sometimes when people take part in interviews, they mistakenly assume that the assessment team will be able to help them with their problems. It is important that you make sure people understand that they will get no direct benefits (for them or their family) by taking part in the interview. You should make it clear throughout the interview that they will not receive any compensation, extra aid, or other benefits just by talking to you. This is important so that people's expectations for help are not raised, and also so that they do not pretend that their needs are more serious than they actually are.

3.4 HORRIFIC EVENTS

Thinking about violent or other horrific events can cause people to become distressed. You should not ask about these events in detail. The HESPER Scale is specifically designed not to need a great level of detail. If the person you are interviewing wants to talk about these events, allow them to do so to some extent, but do not ask them for more details as this is not the purpose of doing the HESPER assessment. In any case, be patient and show that you are listening.

3.5 HANDLING DISTRESS

The person you are interviewing may stop the interview at any time. If they ask to stop the interview, please do so immediately. The person does not need to give a reason for wanting to stop the interview. It is okay to continue with the interview if the person is a little upset and agrees to gently continue with the interview. However, if the person is getting very upset by a topic, it may be a good idea to close the interview booklet and be silent until they calm down. You could then say: "You seem very upset. Are you okay to continue the interview or would you prefer to stop?" At the end of the interview, refer the person to the best available psychosocial support worker and let your project leader or supervisor know. Before your first interview your supervisor should give you a list of support organisations that you can give to the people you interview. See Box 8 for an example of how you could end the interview, if the person chooses to end the interview early.

Box 8

Example of how to end the interview early, if requested by the person being interviewed

Interviewer: "You seem very upset. Are you okay to continue the interview or would you prefer to stop?"

Person being interviewed: "I would prefer to stop."

Interviewer: "Okay, that is no problem. We will stop the interview. Thank you very much for taking part in the assessment. I am very sorry that you got upset. If you want, I can let somebody know that you are very upset by the situation you are in and they may contact you to talk about this. Would that be okay with you?

I will now pass your answers to (insert name of organisation) together with the answers of many other people from your community. We will not give your name to anybody and we will keep your answers safe and secure. As I mentioned before the interview, we are doing the assessment to find out what serious problems people in this community are facing. Have you got any more questions at this point?

If you have any questions about this interview at any time in the future, please contact (insert the name of a person and organisation). Thank you again for taking part."

3.6 SELF-CARE

It is possible that you may feel upset or distressed by an interview, or that you find the interview process difficult. If this is the case, please speak to your supervisor or project manager, or a staff welfare officer if there is one available.

3.7 SUPERVISION

If possible, you should meet with your supervisor and other interviewers at the end of each day to review the interview process.

4. Practice assessments

4.1 EXAMPLE INTERVIEW

It is important to practice interviews before using the HESPER Scale for the first time. Here are some examples of the types of questions and answers which may come up during an interview. Only a few of the HESPER Scale's problem areas are given here as examples.

Mani is a 42-year-old man from the Democratic Republic of the Congo (DRC). He and his wife, five children and other family members have had to leave their village due to rebel fighting in the area.

Drinking water (question 1)
Interviewer: "Do you have a serious problem because you do not have enough water that is safe for drinking or cooking?"
Mani: "We had problems for a long time and we had to find water wherever we could. In the last few days though aid workers have come and they have given us water to drink."
Interviewer: "That's good. So would you say that you have still got a serious problem with this, or is it okay now?"
Mani: "It is a problem, but it is not a serious problem."

Food (question 2)
Interviewer: "Do you have a serious problem with food? For example, because you do not have enough food, or good enough food, or because you are not able to cook food."
Mani: "We don't have enough food at all."
Interviewer: "Would you say that this is a serious problem?"
Mani: "Yes, very serious."

Place to live in (question 3)
Interviewer: "Do you have a serious problem because you do not have a suitable place to live in?"
Mani: "We have nowhere to stay at the moment. We are sleeping outside without any shelter. My children are cold and when it rains we get wet. It is a serious problem."

Clothes, shoes, bedding or blankets (question 6)
Interviewer: "Do you have a serious problem because you do not have enough, or good enough, clothes, shoes, bedding or blankets?"

Mani: "We have received some from the aid organisation."
Interviewer: "That's great. So, would you say that you are okay with it now, or do you still think that you have a serious problem with it?"
Mani: "No, we are okay with it."

Separation from family members (question 15)
Interviewer: "Do you have a serious problem because you are separated from family members?"
Mani: "My family have been lucky in that way. We have all managed to stay together the whole time."
Interviewer: "That is great. So, would you say that you have a serious problem in that area, or is it okay?"
Mani: "No, that is okay."

This is how you would rate each question based on Mani's answers.

Rating: **0 = no serious problem** **1 = serious problem** **9 = does not know / not applicable / declines to answer**	**Ratings**
1. Drinking water Do you have a serious problem because you do not have enough water that is safe for drinking or cooking?	0
2. Food Do you have a serious problem with food? For example, because you do not have enough food, or good enough food, or because you are not able to cook food.	1
3. Place to live in Do you have a serious problem because you do not have a suitable place to live in?	1
6. Clothes, shoes, bedding or blankets Do you have a serious problem because you do not have enough, or good enough, clothes, shoes, bedding or blankets?	0
15. Separation from family members Do you have a serious problem because you are separated from family members?	0

After the interviewer has rated all of the HESPER Scale's problem areas based on Mani's answers, she asks him the following questions.

Interviewer: "Do you have any other serious problems that I have not yet asked you about?"
Mani: "No, I think we have talked about all of my problems."
Interviewer: "So, you have told me that you have a serious problem with 'Food' and 'Place to live in'. Out of these problems, which one is the most serious problem?"
Mani: "Our most serious problem is not having enough food. Our next biggest problem is not having a suitable place to live in."

This is how you would make priority ratings based on Mani's answers.

Priority ratings for serious problems:	
Read out the titles of all questions you have rated as '1', as well as any other serious problems listed above. Write down the person's answers (write down the number and title of the questions).	
1.	Out of these problems, which one is the most serious problem? 2 – Food
2.	Which one is the second most serious problem? 3 – Place to live in

4.2 PRACTICE QUESTIONS

This section gives you the chance to practice your interviewing skills. Each question has a set of multiple choice answers. Please try to answer the questions before looking at the answers on page 64.

1. Interviewer: "Do you have a serious problem because you do not have enough, or good enough, clothes, shoes, bedding or blankets?" (question 6)
   Person being interviewed: "Yes."

   What should the interviewer do?
   a. Rate the question as '1' and move on to the next question.
   b. Rate the question as '0' and move on to the next question.
   c. Rate the question as '9' and move on to the next question.

2. Interviewer: "Do you have a serious problem because you do not have a suitable place to live in?" (question 3)
   Person being interviewed: "No, we have a hut. That is okay."

   What should the interviewer do?
   a. Rate the question as '0' and move on to the next question.
   b. Rate the question as '9' and move on to the next question.
   c. Rate the question as '1' and move on to the next question.

3. Interviewer: "Is there a serious problem in your community because people have a mental illness?" (question 25)
   Person being interviewed: "I am not sure. There may be, but I don't know."

   What should the interviewer do?
   a. Rate the question as '0' and move on to the next question.
   b. Rate the question as '1' and move on to the next question.
   c. Rate the question as '9' and move on to the next question.

4. Interviewer: "Is there a serious problem in your community because there is not enough care for people who are on their own? For example, care for unaccompanied children, widows or elderly people, or unaccompanied people who have a physical or mental illness, or disability." (question 26)
   Person being interviewed: "There are many people who are not looked after. It is a serious problem."

   What should the interviewer do?
   a. Rate the question as '1' and move on to the next question.
   b. Rate the question as '9' and move on to the next question.
   c. Rate the question as '0' and move on to the next question.

5. Interviewer: "Do you have a serious problem with food? For example, because you do not have enough food, or good enough food, or because you are not able to cook food." (question 2)
   Person being interviewed: "No, it is not a problem."

   What should the interviewer do?
   a. Rate the question as '1' and move on to the next question.
   b. Rate the question as '0' and move on to the next question.
   c. Rate the question as '9' and move on to the next question.

6. Interviewer: "Do you have a serious problem because you do not have easy and safe access to a clean toilet?" (question 4)
   Person being interviewed: "No, that is okay."

   What should the interviewer do?
   a. Rate the question as '9' and move on to the next question.
   b. Rate the question as '0' and move on to the next question.
   c. Rate the question as '1' and move on to the next question.

7. Interviewer: "Do you have a serious problem because your children are not in school, or are not getting a good enough education?" (question 12)
   Person being interviewed: "I do not have any children."

   What should the interviewer do?
   a. Rate the question as '0' and move on to the next question.
   b. Rate the question as '1' and move on to the next question.
   c. Rate the question as '9' and move on to the next question.

8. Interviewer: "Do you have a serious problem because in your situation it is difficult to care for family members who live with you? For example, young children in your family, or family members who are elderly, physically or mentally ill, or disabled." (question 13)
   Person being interviewed: "That is family business. I don't want to talk about this."

   What should the interviewer do?
   a. Rate the question as '1' and move on to the next question.
   b. Rate the question as '0' and move on to the next question.
   c. Rate the question as '9' and move on to the next question.
   d. Say: "This seems to be an issue. It would be great if you could please give me an answer to this question. Do you have a serious problem with this?"

9. Interviewer: "Do you have a serious problem because you do not have enough information? For example, because you do not have enough information about the aid that is available." (question 17)
   Person being interviewed (non-displaced): "No, I would say that is okay."

   What should the interviewer do?
   a. Rate the question as '0' and move on to the next question.
   b. Rate the question as '1' and move on to the next question.
   c. Rate the question as '9' and move on to the next question.

10. Interviewer: "Do you have a serious problem because you are not able to move between places? For example, going to another village or town." (question 20)
    Person being interviewed: "It is a problem. Sometimes it can be difficult to get to my workplace because of road blocks."

    What should the interviewer do?
    a. Rate the question as '1' and move on to the next question.
    b. Ask: "Would you say that this is a **serious** problem?" If the person answers "Yes", rate the question as '1' and move on to the next question. If they answer "No", rate the question as '0' and move on to the next question.
    c. Rate the question as '0' and move on to the next question.

11. Interviewer: "Do you have a serious problem because you do not have enough water that is safe for drinking or cooking?" (question 1)
    Person being interviewed: "Yes, it is – we have to collect water from the rain and it does not rain often. The water is very dirty. Sometimes we do not have water for a few days."

    What should the interviewer do?
    a. Rate the question as '1' and move on to the next question.
    b. Rate the question as '0' and move on to the next question.
    c. Rate the question as '9' and move on to the next question.
    d. Ask: "Is this a **serious** problem?" If the person answers "Yes", rate the question as '1' and move on to the next question. If they answer "No", rate the question as '0' and move on to the next question.

12. Interviewer: "Do you have a serious problem because you or your family are not safe or protected where you live now? For example, because of conflict, violence or crime in your community, city or village." (question 11)
    Person being interviewed: Looks upset and cries a little.

    What should the interviewer do?
    a. Ask: "Is the problem serious?" If the person answers "Yes", rate the question as '1' and move on to the next question. If they answer "No", rate the question as '0' and move on to the next question.
    b. Ask: "Are you okay to continue?" If the person says "Yes", ask: "Is the problem serious?" If they answer "Yes", rate the question as '1' and move on to the next question. If they answer "No", rate the question as '0' and move on to the next question.
    c. Rate the question as '1' and move on to the next question.

13. Interviewer: "Do you have a serious problem because you have too much free time in the day?" (question 21)
    Person being interviewed: "It is a problem – there is not much to do."

    What should the interviewer do?
    a. Rate the question as '1' and move on to the next question.
    b. Ask: "Would you say that it a **serious** problem?" If the person answers "Yes", rate the question as '1' and move on to the next question. If they answer "No", rate the question as '0' and move on to the next question.
    c. Rate the question as '0' and move on to the next question.
    d. Rate the question as '9' and move on to the next question.

14. Interviewer: "Do you have a serious problem because of inadequate aid? For example, because you do not have fair access to the aid that is available, or because aid agencies are working on their own without involvement from people in your community." (question 18)
    Person being interviewed: "I have not heard anything. Maybe you can tell me. What is happening? Are we going to receive any aid? And where do we get it from? We haven't been told anything."

    What should the interviewer do?
    a. Say: "That's a shame. Unfortunately I do not have much information either. I am happy to talk about this after the interview. We would really like to hear about your experiences at this time. Would it be okay to continue with the interview for now? So, would you consider the lack of information a serious problem?"
    b. Ask: "Is this lack of information a serious problem?"
    c. Rate the question as '1' and move on to the next question.
    d. Rate the question as '0' and move on to the next question.

15. Interviewer: "Is there a serious problem for women in your community because of physical or sexual violence towards them, either in the community or in their homes?" (question 23)
    Person being interviewed (female)*:* Gets upset and sobs heavily.

    What should the interviewer do?
    a. Ask: "Is this a serious problem?"
    b. Close the interview booklet. Wait until the sobbing stops. Ask: "Are you okay? Are you okay to continue with the interview?" If the person answers "Yes", open the interview booklet and continue the interview. If they answer "No", end the interview.
    c. Ask: "Are you okay? Are you okay to continue with the interview?" If the person answers "Yes", continue with the interview. If they answer "No", end the interview.
    d. Rate the question as '1' and move on to the next question.

Answers to practice questions

1. The correct answer is a. If the person thinks there is a serious problem, the interviewer should rate the question as '1'.

2. The correct answer is a. If the person does not think there is a serious problem, the interviewer should rate the question as '0'.

3. The correct answer is c. If the person does not know how to answer, the interviewer should rate the question as '9'.

4. The correct answer is a. If the person thinks there is a serious problem, the interviewer should rate the question as '1'.

5. The correct answer is b. If the person does not think there is a serious problem, the interviewer should rate the question as '0'.

6. The correct answer is b. If the person does not think there is a serious problem, the interviewer should rate the question as '0'.

7. The correct answer is c. If a question does not apply to the person, the interviewer should rate the question as '9'.

8. The correct answer is c. The person can choose not to answer a question. If the person does not want to answer a question, the interviewer should rate that question as '9'.

9. The correct answer is a. If the person does not think there is a serious problem, the interviewer should rate the question as '0'.

10. The correct answer is b. The interviewer should only rate the question as '1' if the person thinks the problem is serious.

11. The correct answer is a. If the person thinks there is a serious problem, the interviewer should rate the question as '1'.

12. The correct answer is b. If the person gets upset, the interviewer should make sure that they are okay to continue with the interview.

13. The correct answer is b. The interviewer should only rate the question as '1' if the person thinks the problem is serious.

14. The correct answer is a. If the person answers "Yes", the interviewer should rate the question as '1'. If the person answers "No", the interviewer should rate the question as '0'.

15. The correct answer is b. It is probably best to close the interview booklet, let the person cry, and get permission to restart the interview when they stop crying. The person can stop the interview at any time without having to give a reason.

4.3 PRACTICE INTERVIEWS

In this section you can find examples of answers that people may give during HESPER assessments (for half of the HESPER questions). You may use these examples when practicing interviews. You can find the answers on pages 68 to 69.

Individual questions

1. Drinking water

Interviewer: "Do you have a serious problem because you do not have enough water that is safe for drinking or cooking?"
Person being interviewed: "Yes"
What should the interviewer do next?

2. Food

Interviewer: "Do you have a serious problem with food? For example, because you do not have enough food, or good enough food, or because you are not able to cook food."
Person being interviewed: "No."
What should the interviewer do next?

3. Place to live in

Interviewer: "Do you have a serious problem because you do not have a suitable place to live in?"
Person being interviewed: "I have a house. It is not great but it is okay."
What should the interviewer do next?

4. Toilets

Interviewer: "Do you have a serious problem because you do not have easy and safe access to a clean toilet?"
Person being interviewed: "I can use the toilets in the camp, but I am scared of going there. It is very dark at night."
What should the interviewer do next?

5. Keeping clean

Interviewer: "Do you have a serious problem because in your situation it is difficult to keep clean? For example, because you do not have enough soap, water or a suitable place to wash."

Person being interviewed (male): "I don't want to talk about that. That is private."

What should the interviewer do next?

6. Clothes, shoes, bedding or blankets

Interviewer: "Do you have a serious problem because you do not have enough, or good enough, clothes, shoes, bedding or blankets?"

Person being interviewed: "Could you tell me where I can find some? My clothes are very old."

What should the interviewer do next?

7. Income or livelihood

Interviewer: "Do you have a serious problem because you do not have enough income, money or resources to live?"

Person being interviewed: "Yes."

What should the interviewer do next?

8. Physical health

Interviewer: "Do you have a serious problem with your physical health? For example, because you have a physical illness, injury or disability."

Person being interviewed: "My leg hurts."

What should the interviewer do next?

9. Health care

Interviewer: "Do you have a serious problem because you are not able to get adequate health care for yourself? For example, treatment or medicines, or health care during pregnancy or childbirth."

Person being interviewed (female): Looks upset and cries a little.

What should the interviewer do next?

10. Distress

Interviewer: "Do you have a serious problem because you feel very distressed? For example, very upset, sad, worried, scared, or angry."

Person being interviewed: "No, I am okay."

What should the interviewer do next?

11. Safety

Interviewer: "Do you have a serious problem because you or your family are not safe or protected where you live now? For example, because of conflict, violence or crime in your community, city or village."

Person being interviewed: Gets upset and cries heavily.

What should the interviewer do next?

12. Education for your children

Interviewer: "Do you have a serious problem because your children are not in school, or are not getting a good enough education?"

Person being interviewed: "I don't have any children."

What should the interviewer do next?

Community questions

22. Law and justice in your community

Interviewer: "Is there a serious problem in your community because of an inadequate system for law and justice, or because people do not know enough about their legal rights?"

Person being interviewed: "I don't think so, no."

What should the interviewer do next?

23. Safety or protection from violence for women in your community

Interviewer: "Is there a serious problem for women in your community because of physical or sexual violence towards them, either in the community or in their homes?"

Person being interviewed: "I don't know about that."

What should the interviewer do next?

24. Alcohol or drug use in your community

Interviewer: "Is there a serious problem in your community because people drink a lot of alcohol, or use harmful drugs?"

Person being interviewed: "I have heard some people saying that it is a problem, but I don't think it is a problem."

What should the interviewer do next?

Answers to practice interviews

Individual questions

1. The interviewer should rate the question as '1' ('serious problem').

2. The interviewer should rate the question as '0' ('no serious problem').

3. The interviewer should say: "Would you say this is a **serious** problem?" If the person answers "Yes", the interviewer should rate the question as '1' ('serious problem'). If the person answers "No", the interviewer should rate the question as '0' ('no serious problem').

4. The interviewer should say: "Is this a serious problem for you?" If the person answers "Yes", the interviewer should rate the question as '1' ('serious problem'). If the person answers "No", the interviewer should rate the question as '0' ('no serious problem').

5. The interviewer should rate the question as '9' ('does not know / not applicable / declines to answer').

6. The interviewer should say something like: "I am sorry to hear that. Unfortunately I do not have any information about that, but I am happy to talk about this after the interview. Would it be okay to continue with the interview for now? Do you think it is a serious problem that your clothes are old?" If the person answers "Yes", the interviewer should rate the question as '1' ('serious problem'). If the person answers "No", the interviewer should rate the question as '0' ('no serious problem').

7. The interviewer should rate the question as '1' ('serious problem').

8. The interviewer should ask: "Is this a serious problem?" If the person answers "Yes", the interviewer should rate the question as '1' ('serious problem'). If the person answers "No", the interviewer should rate the question as '0' ('no serious problem').

9. The interviewer should ask: "Are you okay to continue?" If the person says "Yes", the interviewer should ask: "Is this a serious problem?" If the person answers "Yes", the interviewer should rate the question as '1' ('serious problem'). If the person answers "No", the interviewer should rate the question as '0' ('no serious problem').

10. The interviewer should rate the question as '0' ('no serious problem').

11. The interviewer should close the interview booklet and wait until the sobbing stops, then ask: "Are you okay? Are you okay to continue with the interview?" If the person says "Yes", the interviewer should open the interview booklet and continue the interview. If the person says "No", the interviewer should end the interview.

12. The interviewer should rate the question as '9' ('does not know / not applicable / declines to answer').

Community questions

22. The interviewer should rate the question as '0' ('no serious problem').

23. The interviewer should rate the question as '9' ('does not know / not applicable / declines to answer').

24. The interviewer should rate the question as '0' ('no serious problem'), as you are rating whether the person you are interviewing thinks this is a serious problem, not whether anybody else thinks this is a serious problem.

4.4 PRACTICE ROLE PLAYS

You should now practice HESPER assessments through role play.

It is a good idea to practice at least three HESPER assessments with a colleague before you do an actual interview. To practice, one of you should act as the interviewer and the other as the person being interviewed – then swap roles. A third colleague may watch the role play and give feedback. If you are in the role of the person being interviewed, you should try to give easy answers at first if the interviewer has never done this type of interview before. Then over time, you can start to challenge the interviewer by giving more difficult answers.

Thatta, Sindh, Pakistan, 2008,
© Sandie Walton-Ellery

Appendix 3

Example HESPER Report
(written in plain language)

The Perceived Needs of the Population in *Location X*
Month 20XX

Name of author
Affiliation
email: *author@institution.org*

Coordination of implementation of study:
Name agency (name relevant agency staff)

Technical support: *Name agency (name relevant agency staff)*

Financial support: *Name source*

With special thanks to the interviewed people in *Location X*.

INTRODUCTION

Describe the context in one paragraph (for example nature and size of the humanitarian emergency and its response).

This report aims to present the findings of an assessment of the perceived needs of the population in *Location X* to relevant stakeholders.

OVERVIEW OF STUDY

The goals of this study were as follows:

1. The first goal was to find out the perceived needs (i.e. the serious problems) that adults living in *Location X* have.

   To measure their serious problems the Humanitarian Emergency Settings Perceived Needs Scale (HESPER) was used. The HESPER Scale measures the serious problems of adults living in humanitarian situations (for instance during conflicts or other disasters), based directly on their own views (i.e. people's perceived needs). It shows the problem areas with which people would like help. The HESPER Scale aims to provide a quick, scientifically robust way to measure people's serious problems, and includes a wide range of social, psychological and physical problem areas.

2. The second goal was to compare the perceived needs that different groups of people have, for example men versus women.

SAMPLING METHOD

Describe sampling methods in one paragraph. Mention what percentage of people who were invited to participate agreed to take part.

SAMPLE

In total, 269 participants were interviewed. All participants in the study were over 18 years of age (the oldest participant was 84 years old). Table 1 shows the characteristics of study participants.

PROCEDURE

Six local interviewers interviewed the participants in *name language* after receiving training on the use of the HESPER Scale. Interviews took place between *date* and *date*, and took place in participants' own homes.

Table 1: Demographic characteristics of study participants. Figures are displayed as number of participants (% in brackets), or averages (means).

	Total (n=269)
Sex	
Men	139 (51.7%)
Women	130 (48.3%)
Average age	36.9
Marital status	
Married	217 (80.7%)
Unmarried	50 (18.6%)
Divorced	2 (0.7%)
Average number of children	2.4
Level of education	
Illiterate / No formal education	108 (40.1%)
Primary school (grades 1 to 5)	55 (20.4%)
Secondary school (grades 6 to 10)	61 (22.7%)
Intermediate (grades 11 to 12)	36 (13.4%)
University	9 (3.3%)
Employment status	
Employed	135 (50.2%)
Not employed	134 (49.8%)
Religion	
Religion 1	178 (66.2%)
Religion 2	52 (19.3%)
Religion 3	18 (6.7%)
Religion 4	16 (5.9%)
Other religion*	5 (1.9%)
Average years displaced	19.0

* Other religions include *insert other religions*.

KEY FINDINGS

1. Interviewers used the HESPER Scale to ask participants about 26 different types of problems (i.e. problem areas). Overall, participants rated 8.1 of these areas as serious problem (the lowest number was 0 and the highest was 21). Figure 1 shows an overview of the number of areas rated as serious problem by participants.

Table 2 and Figure 2 show the frequency with which each of the 26 HESPER areas were rated as one of participants' three most serious problems (i.e. as either their most serious problem, second most serious problem, or third most serious problem). 'Income or livelihood' was rated by almost half of all participants (47.2%) as one of their three most serious problems, more than any other problem area. Other areas which were named by more than 10% of participants as one of their three most serious problems included 'Food' (24.5%), 'Physical health' (23.0%), 'Place to live in' (20.8%), 'Being displaced from home' (18.6%), 'Separation from family members' (16.7%), 'Clothes, shoes, bedding or blankets' (16.4%), and 'Alcohol or drug use in your community' (14.5%).

Table 3 shows the number of participants who rated each of the 26 HESPER areas as serious problem. 'Income or livelihood' was rated as serious problem by 75.1% of participants, again more than any other problem area. The following areas were rated as serious problem by around half of participants: 'Food' (58.0%), 'Being displaced from home' (52.0%), 'Clothes, shoes, bedding, or blankets' (49.1%), 'Place to live in' (44.6%), and 'Separation from family members' (42.0%).

When asked to name any other serious problems not listed on the HESPER Scale, 44 (16.4%) participants named a problem related to resettlement, of whom 13 (4.8%) rated it as one of their three most serious problems.

2. Men and women had a similar number of serious problems overall; the average number for men was 8.5 and for women was 7.7. This difference was not statistically significant.

CONCLUSIONS

1. The study gives an overview of the serious problems that the population living in *Location X* have, based directly on their own views. 'Income or livelihood' was the area which was perceived as serious problem by the largest number of participants, and was also rated by the largest number of participants as one of their three most serious problems. Other areas which were commonly rated as one of participants' three most serious problems, and were also perceived as serious problem by a large number of participants, were 'Food', 'Physical health', 'Place to live in', 'Being displaced from home', 'Separation from family members', 'Clothes, shoes, bedding, or blankets', and 'Alcohol or drug use in your community'.

Other serious problems which were named commonly by participants were issues with resettlement.

2. Men and women had a similar number of serious problems overall.

LIMITATIONS

No substantial errors or biases were indentified by the research team. Indeed, the sample size was large, sampling was representative, interviewers were well trained, reliability and validity data were good, and interviewers did not report that participants had an inclination to overestimate or underestimate their needs.

RECOMMENDATIONS

Based on our findings, we recommend that:

1. Actors in *Location X* should consider addressing *name prioritized perceived need areas*.
2. More detailed interviews (for example key informant interviews or focus groups) should be conducted with the population in *Location X*. These should focus especially on *insert perceived need areas* to gain a deeper understanding of them, and to identify relevant community resources, suitable interventions and supports.

Figure 1: Number of serious problem ratings by number of participants.

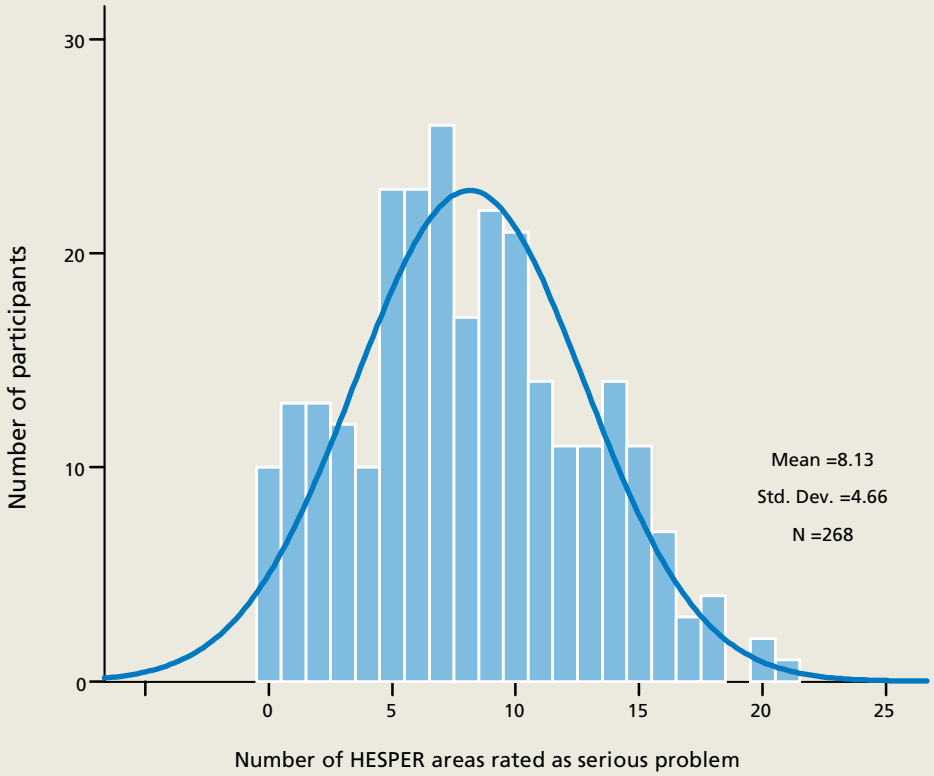

Table 2: Number of participants (% in brackets) who rated each of the HESPER Scale's problem areas as one of their three most serious problems (n=269). Items are ranked and listed in descending order of total priority ratings.

HESPER item	Total priority ratings	Priority rating 1	Priority rating 2	Priority rating 3
1. Income or livelihood	127 (47.2%)	57 (21.2%)	38 (14.1%)	32 (11.9%)
2. Food	66 (24.5%)	28 (10.4%)	20 (7.4%)	18 (6.7%)
3. Physical health	62 (23.0%)	27 (10.0%)	19 (7.1%)	16 (5.9%)
4. Place to live in	56 (20.8%)	18 (6.7%)	22 (8.2%)	16 (5.9%)
5. Being displaced from home	50 (18.6%)	19 (7.1%)	19 (7.1%)	12 (4.5%)
6. Separation from family members	45 (16.7%)	15 (5.6%)	12 (4.5%)	18 (6.7%)
7. Clothes, shoes, bedding or blankets	44 (16.4%)	5 (1.9%)	16 (5.9%)	23 (8.6%)
8. Alcohol or drug use in your community	39 (14.5%)	10 (3.7%)	13 (4.8%)	16 (5.9%)
9. Care for people in your community who are on their own	21 (7.8%)	7 (2.6%)	6 (2.2%)	8 (3.0%)
9. Health care	21 (7.8%)	6 (2.2%)	9 (3.3%)	6 (2.2%)
9. Distress	21 (7.8%)	6 (2.2%)	9 (3.3%)	6 (2.2%)
12. Toilets	19 (7.1%)	5 (1.9%)	8 (3.0%)	6 (2.2%)
13. Too much free time	18 (6.7%)	7 (2.6%)	4 (1.5%)	7 (2.6%)
13. Mental illness in your community	18 (6.7%)	5 (1.9%)	6 (2.2%)	7 (2.6%)
15. Care for family members	17 (6.3%)	5 (1.9%)	8 (3.0%)	4 (1.5%)
16. Education for your children	16 (5.9%)	4 (1.5%)	11 (4.1%)	1 (0.4%)
16. Safety or protection from violence for women in your community	16 (5.9%)	3 (1.1%)	7 (2.6%)	6 (2.2%)
18. Keeping clean	11 (4.1%)	1 (0.4%)	4 (1.5%)	6 (2.2%)
19. Moving between places	10 (3.7%)	2 (0.7%)	5 (1.9%)	3 (1.1%)

20. Safety	9 (3.3%)	5 (1.9%)	2 (0.7%)	2 (0.7%)
21. The way aid is provided	8 (3.0%)	4 (1.5%)	2 (0.7%)	2 (0.7%)
21. Law and justice in your community	8 (3.0%)	2 (0.7%)	3 (1.1%)	3 (1.1%)
23. Drinking water	7 (2.6%)	4 (1.5%)	1 (0.4%)	2 (0.7%)
24. Respect	3 (1.1%)	1 (0.4%)	0	2 (0.7%)
25. Support from others	2 (0.7%)	0	0	2 (0.7%)
26. Information	0	0	0	0

Figure 2: Proportion with which each of the HESPER Scale's problem areas was given a priority rating by participants (i.e. was rated as one of participants' three most serious problems). Only the 12 HESPER problem areas which received the most priority ratings are listed. The remaining 14 problem areas are grouped together under the 'Other' category.

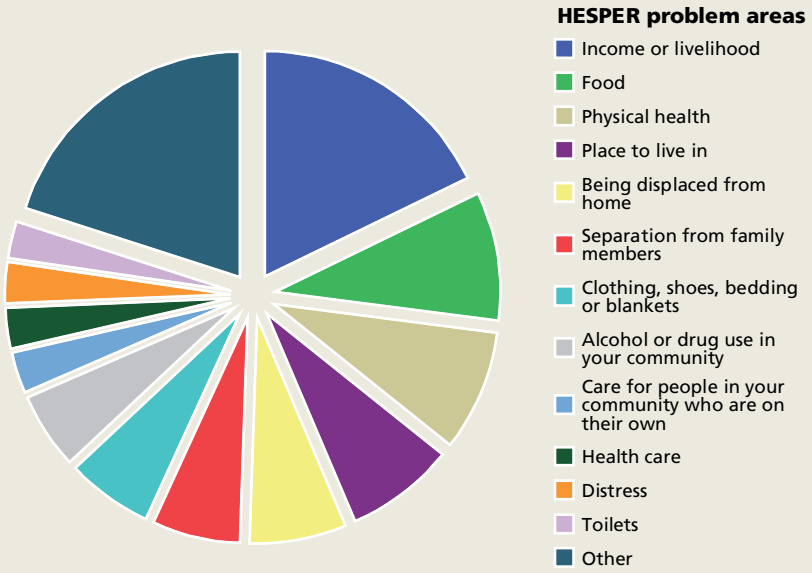

Table 3: Number of participants (% in brackets) who rated each of the HESPER Scale's problem areas as serious problem, no serious problem or did not answer (i.e. not known, not applicable, or answer declined) (n=269). Areas are ranked and listed in descending order of serious problem ratings.

HESPER item	Serious problem	No serious problem	No answer
1. Income or livelihood	202 (75.1%)	67 (24.9%)	0
2. Food	156 (58.0%)	113 (42.0%)	0
3. Being displaced from home	140 (52.0%)	121 (45.0%)	8 (3.0%)
4. Clothes, shoes, bedding or blankets	132 (49.1%)	137 (50.9%)	0
5. Place to live in	120 (44.6%)	149 (55.4%)	0
6. Separation from family members	113 (42.0%)	156 (58.0%)	0
7. Alcohol or drug use in your community	111 (41.3%)	156 (58.0%)	2 (0.7%)
8. Physical health	107 (39.8%)	162 (60.2%)	0
9. Care for people in your community who are on their own	96 (35.7%)	170 (63.2%)	3 (1.1%)
10. Distress	93 (34.6%)	176 (65.4%)	0
11. Too much free time	91 (33.8%)	178 (66.2%)	0
12. Keeping clean	84 (31.2%)	185 (68.8%)	0
13. Care for family members	75 (28.0%)	193 (72.0%)	0
14. Toilets	75 (27.9%)	194 (72.1%)	0
15. Moving between places	70 (26.0%)	199 (74.0%)	0
16. Safety or protection from violence for women in your community	69 (25.7%)	193 (71.7%)	7 (2.6%)
17. Law and justice in your community	67 (24.9%)	192 (71.4%)	10 (3.7%)
18. Health care	67 (24.9%)	201 (74.7%)	1 (0.4%)
19. Mental illness in your community	63 (23.4%)	203 (75.5%)	3 (1.1%)

20. The way aid is provided	52 (19.3%)	217 (80.7%)	0
21. Safety	45 (16.7%)	224 (83.3%)	0
22. Information	42 (15.6%)	226 (84.0%)	1 (0.4%)
23. Education for your children	36 (13.4%)	201 (74.7%)	32 (11.9%)
24. Respect	32 (11.9%)	237 (88.1%)	0
25. Support from others	29 (10.8%)	240 (89.2%)	0
26. Drinking water	18 (6.7%)	251 (93.3%)	0

Numbers do not always add up to total number of participants due to missing data.

Sri Lanka, following the Indian Ocean tsunami, 2005, © WHO

SIMPLE RANDOM SAMPLING

Simple random sampling is the most basic and straightforward type of probabilistic sampling. It involves selecting each sampling unit randomly and independently from a list of all sampling units.

Step-by-step guide to simple random sampling

- Obtain a list of all sampling units, i.e. all members of the target population or all households.
- Number each sampling unit on this list.
- Then select sampling units into the study by randomly choosing numbers (e.g. by using a random number table).
- Continue until you have reached your required sample size.
- *If households are used as sampling units:* Randomly select one individual in each chosen household into the study, for instance by using a Kish Table (41), see Appendix 5; also see step 3 under cluster sampling below).

SYSTEMATIC RANDOM SAMPLING

Systematic random sampling is similar to simple random sampling, in that each sampling unit is chosen randomly and independently from a list of all sampling units. However, the method by which sampling units are selected into the study is different.

Step-by-step guide to systematic random sampling

- Obtain a list of all sampling units, i.e. all members of the target population or all households.
- Number each sampling unit on this list.
- Calculate a sampling interval by dividing the number of sampling units by the sample size.
- Randomly select a number between 1 and the number of the sampling interval (e.g. by using a random number table). This is the first sampling unit selected into the study.
- Select each new sampling unit by adding the number of the sampling interval to the previous number.
- Continue until you have reached your required sample size.
- *If households are used as sampling units:* Randomly select one individual in each chosen household into the study, for instance by using a Kish Table (41), see Appendix 5; also see step 3 under cluster sampling below).

CLUSTER SAMPLING

Cluster sampling essentially involves selecting smaller geographical areas (or clusters) from within the target population, and then using simple or systematic random sampling methods within these smaller areas. For this, the target population is first divided according to clusters, such as different areas in a country, different towns or villages in a country or region, different areas of a town, different camps etc. Individuals are then selected into the study by:

1. Randomly selecting a specified number of clusters.
2. Randomly selecting a specified number of households within these chosen clusters.
3. Randomly selecting an individual as study participant from within the chosen households.

The advantages of cluster sampling over simple or systematic random sampling are (40):

- It does not require a complete list of all members of the target population or all households.
- It is cheaper (as individuals selected into the study live more closely to one other).

However, the disadvantages of cluster sampling are that (40):

- It leads to less precise estimates.
- It complicates the statistical analyses.
- It requires larger sample sizes. This is due to the design effect, which means that individuals living in close proximity to each other are more likely to have the same, or similar, characteristics than those not living closely together (i.e. outcomes tend to cluster within populations). The higher the clustering of an outcome in the population, the higher the design effect and the larger the sample size needs to be.

Step-by-step guide to cluster sampling

Step 1 – Selecting clusters

- Obtain or construct a list of all clusters (e.g. towns within a country, camps in a given area), together with their population sizes (if known).
- Decide on the number of clusters to include in the study. It is common in epidemiological surveys to choose 30 clusters, which is often sufficient.
- Calculate your sampling interval by dividing the total population size (of all clusters combined) by the number of clusters that are being included in the study.
- Randomly select a number between 1 and the sampling interval (e.g. by using a random number table).
- Use this random number as start cluster; choose your second cluster by adding the sampling interval and selecting the next cluster accordingly.
- Continue with this until you have reached your required number of clusters.

Step 2 – Selecting households within clusters

Randomly select households within chosen clusters through one of these methods:

- Simple or systematic random sampling of households: Obtain a complete list of all households in the cluster, for example by asking a community leader, obtaining a map of the cluster (e.g. by using GoogleEarth), or by drawing out a map yourself (if clusters are small). Then give each household a number, and randomly select the required number of households by using simple or systematic random sampling techniques (see page 80 above). If there are more than 100 to 200 households in the cluster, divide the cluster into sub-sections, and then list and randomly select households from a randomly selected sub-section.
- Segmentation method: As in the method above, obtain or draw a map of all households in selected clusters. Then divide each cluster into segments of approximately equal size, choose one of these segments from within each cluster at random, and select all households within each of these segments into the study. The size of segments (i.e. the number of households in each segment) should correspond to the number of households required per cluster.
- Random-walk method: As this method is the most prone to bias, it should only be used where the other two methods described above are not feasible. Where there is a map of the cluster, a starting point may be chosen by listing a few different possible starting points on the map at easily identifiable locations, and then randomly selecting one of these. Where there is no map of the cluster, start at the centre of the cluster. Then choose a random walking direction, for example by spinning a pen or a bottle. Walk in a straight line in the selected direction until you reach the edge of the cluster, counting the number of houses in that line. Randomly select a number between 1 and the number of houses in the line (e.g. by using a random number table); this is the first house. Select the next closest house to this house, then the next closest house to that etc (these do not necessarily have to lie in the initial line that was used to select the first house), until you have completed the number of houses required in that cluster.

Step 3 – Selecting individuals within chosen households

- List all individuals within selected households who are eligible for your study (e.g. all members of the household who are 18 years of age or older). Include even those who are absent at the time of your visit, but who usually live there. You can do this by asking the person you have approached to tell you who lives there.
- Randomly select an individual from this list. One way in which you may do this is to use a Kish Table (41) (see Appendix 5).

Appendix 5 - Kish Table

Kish Table										
	People in the household who are eligible for the study (oldest listed first, youngest last):	**Participant number ending in:**								
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**0**
1		1	1	1	1	1	1	1	1	1	1
2		2	1	2	1	2	1	2	1	2	1
3		3	2	1	3	2	1	3	2	1	3
4		4	3	2	1	4	3	2	1	4	3
5		5	4	3	2	1	5	4	3	2	1
6		6	5	4	3	2	1	6	5	4	3

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- List every eligible respondent in the household, for example every person over 18 years of age. List them in order of their age, with the oldest person listed first, and the youngest last. Include even those people who are absent at the time of your visit but who usually live there. You can do this by asking the person you have approached to tell you who lives there.
- Circle the number to the left of the last person on the list (in the left column).
- In the top row of the table, find the number corresponding to the last digit of the pre-assigned participant number, and circle it.
- Circle the number in the box at which the chosen row and column cross. You should interview the person on your list who corresponds to this number.

Example

- We are imagining that there are three eligible people living in the household. Write down their names in the left-hand column, and then circle the number 3 in the column to the left (i.e. the number of eligible people in the household).
- We are imagining that the pre-assigned participant number is 68. Circle the number 8 in the row at the top of the table (i.e. the last digit of the participant number).
- Find the number in the box at which the chosen row and column cross; in this case it is the number 2. The person you should interview would therefore be the second person on the list in the left-hand column.

Appendix 6 - Performing Sample Size Calculations

In order to perform a sample size calculation, you will need to decide:

- The likely prevalence of your outcome (which in HESPER surveys is 'perceived needs'). To estimate this, you could look at previous similar surveys of needs, or previous qualitative interviews. As it may often be difficult to estimate the prevalence of perceived needs for each of the HESPER Scale's 26 items, it may often be appropriate to assume a prevalence of 50%, as this will give you the largest (and therefore most conservative) sample size estimate (i.e. you will be erring on the side of caution).
- How precisely your outcome should be measured (38). For this, you will need to determine both the required level of precision in your study, and also the highest acceptable level of error. These will both depend on the reasons for the study and on the resources available (38). For HESPER surveys, a level of precision of 10%, and a risk of error of 5%, should usually be adequate.

The formula to calculate a required sample size is (as long as the target population includes at least a few thousand people) (40):

$$n = \left(t^2 \times \frac{p \times q}{d^2} \right)$$

where:

n is the required sample size

t is a value related to the risk of error (where the risk of error is 5%, a figure of 1.96 should be used for this)

p is the expected prevalence (reported as a fraction of 1, e.g. 0.5)

q is the expected non-prevalence (i.e. 1-p)

d is the level of precision (also reported as a fraction of 1, e.g. 0.1)

As an example, where the expected prevalence is 50% (or 0.5), the level of precision is 10% (or 0.1), and the risk of error is 5% (as may commonly be appropriate for HESPER surveys), the required sample size would be as follows:

$$n = \left(1.96^2 \times \frac{0.5 \times 0.5}{0.1^2} \right) = \left(3.8416 \times \frac{0.25}{0.01} \right) = 96.04$$

The required sample size (i.e. the minimum number of people needed to participate in the study) would be 96. The level of precision of 10% would, in this case, imply a likely range for the true value of between 40% and 60%, and the risk of error would imply that there was a 5% chance that the true value would lie outside this range.

However, the calculated sample size would then also need to be adjusted according to the following factors:

- Margin for non-response (for all studies).
- Design effect (only where cluster sampling methods have been used).

This is done as follows:

- Calculate the minimum number of people needed for the study by using the formula above:

$$n = \left(t^2 \times \frac{p \times q}{d^2} \right)$$

- If you are using cluster sampling methods, multiply this number (n) by the design effect. Skip this step if you are using simple or systematic random sampling methods.
- Divide the obtained number by the expected response rate to account for non-response.
- The resulting number is the number of people you need to select into your study.

Sample size adjustment for non-response

Not all respondents who are invited to participate in a survey will take part. The most common reasons are that respondents are not at home, or that respondents decline to participate (38).

Sample size requirements always need to be adjusted to account for this non-response. You may establish the likely non-response rate by looking at similar surveys that have been conducted in the target population previously. Non-response rates may vary widely depending on the setting, target population and sampling method. Generally, although a non-response rate of 30% is considered adequate, often non-response rates in humanitarian settings may be less than 10%.

The formula to account for non-response is:

$$n_{\text{accounting for non-response}} = n_{\text{not accounting for non-response}} \ / \ \text{expected response (i.e. 1 – expected non-response)}$$

In our example above, if the non-response rate was expected to be 10%, the following calculation would be performed:

$$n_{\text{accounting for non-response}} = 96 \ / \ 0.9 = 106.67$$

The adjusted sample size (of people to approach for the study) would be 107.

Sample size adjustment for cluster sampling

In studies where a cluster sampling method is used, the required sample size will need to be multiplied by the design effect. Required sample sizes are therefore higher in studies using cluster sampling methods than in those employing simple or systematic random sampling techniques. For instance, for a survey employing cluster sampling methods in which the design effect is 2, the required sample size would be twice that of one using simple or systematic random sampling. In practice, though design effects vary according to type of outcome and location, a design effect of 2 is commonly used.

The formula to calculate the required sample size in studies where cluster sampling has been employed is:

$$n_{\text{accounting for design effect and non-response}} = \left(t^2 \times \frac{p \times q}{d^2} \right) \times \text{design effect} \ / \ \text{expected response}$$

In our example above, with a design effect of 2 and a margin of non-response of 10%, the sample size calculation would be:

$$n_{\text{accounting for design effect and non-response}} = \left(\left(1.96^2 \times \frac{0.5 \times 0.5}{0.1^2} \right) \times 2 \right) / 0.9 = 96.04 \times 2 / 0.9 = 213.42$$

The required sample size (of people to approach for the study) would be 213.

CONFIDENCE INTERVALS FOR PREVALENCE

The formula to calculate 95% confidence intervals for prevalence is as follows:

95% CI = prevalence +/- 1.96 x standard error (SE) of the prevalence

The standard error (SE) for prevalence (P) is calculated by:

$SE = \sqrt{P\ (100 - P) / n}$

For example, if in a sample of 200 respondents 25% of respondents rated the HESPER item 'Drinking water' as a serious problem, the 95% confidence intervals would be calculated as follows:

$SE = \sqrt{P\ (100\text{-}P) / n} = \sqrt{25\ (100\text{-}25) / 200} = \sqrt{25 \times 75 / 200} = \sqrt{1875 / 200} = 3.06$

95%CI = 25 – 1.96 x 3.06 = 19.0%
95%CI = 25 + 1.96 x 3.06 = 31.0%

95%CI = 19.0% – 31.0%

This means that if we repeated the same study 100 times under the same conditions but with a different sample, in 95 of these samples the proportion of respondents who rated the HESPER item 'Drinking water' as serious problem would lie between 19% and 31%. The true value in the target population would be likely to lie within this range (with 95% certainty), with the most likely true value being 25%.

Appendix 7 continued on next page

CONFIDENCE INTERVALS FOR MEAN

The formula to calculate 95% confidence intervals for a mean is as follows:

95% CI = mean +/- 1.96 x standard error (SE) of the mean

The standard error (SE) for a mean is calculated by:
standard deviation (SD) / $\sqrt{n}$.

For example, if in a sample of 100 respondents on average (mean figure) respondents rated 12.0 (SD 2.5) of the HESPER items as serious problem, 95% confidence intervals for this mean would be calculated as follows:

SE = 2.5 / $\sqrt{100}$ = 2.5 / 10 = 0.25

95%CI = 12.0 – 1.96 x 0.25 = 11.51
95%CI = 12.0 + 1.96 x 0.25 = 12.49

95%CI = 11.51 – 12.49

This means that if we repeated the same study 100 times under the same conditions but with a different sample, in 95 of these samples the mean number of 'serious problem' ratings by respondents would lie between 11.51 and 12.49. The true value in the target population would be likely to lie within this range (with 95% certainty), with the most likely true value being 12.0.

EXAMPLE PARTICIPANT INFORMATION SHEET / CONSENT FORM

Hello, my name is …We are inviting you to take part in an assessment by *insert your agency / organisation.* We are conducting an assessment to find out about the serious problems that people have when they have experienced a conflict or another disaster. We hope that by better understanding what people like you see as their serious problems, more people will get the help they really want.

I would like to assure you that participation in this assessment is voluntary. I can also assure you that all the information we receive will be completely confidential, so it will not be possible for anybody outside our team to link any of the information we collect to you.

If you decide to take part, we would invite you to meet with the interviewer on one occasion. The interview would take about 15 to 30 minutes of your time and we would ask you questions about the serious problems you may currently be experiencing.

You can either start the assessment now, or you can let us know within the next few days whether you would like to take part. If you decide to take part, you have the right to decline to answer any question I ask you. Please just let me know and I will move to the next question. You may also stop the interview at any time if you wish and without having to give a reason. Unfortunately we will not be able to offer you or your family any compensation or other benefits if you decide to take part.

If you have any questions now or in the future you can contact *insert your organisation's address and telephone number* for further advice and information.

Thank you for your time.

Do you have any questions?

Do you agree to be in this assessment? **Yes** **No**

_____ _____

Signature Date

either to be signed by participant (where written consent is taken), or by interviewer as witness to participants' consent (where verbal consent is taken)

Displacement camp
in Port-au-Prince, Haiti, 2010,
© Maya Semrau

The Humanitarian Emergency Settings Perceived Needs Scale (HESPER) provides a quick, scientific method of assessing the perceived needs of people affected by large-scale humanitarian emergencies, such as war, conflict or major natural disaster.

Identifying such needs is vital to inform and monitor the humanitarian response. The HESPER Scale goes beyond previous approaches by assessing perceived needs, i.e. those needs which are felt by the people who are themselves directly affected. The scale can be used in population-based surveys and can thus help create a picture of a population's perceived needs.

This Manual is for project leaders or supervisors who wish to learn how to conduct a needs assessment using the HESPER Scale. The Manual contains all the information required to carry out a HESPER assessment, including a detailed explanation of how to use the HESPER Scale, how to train interviewers, how to organise, analyze and report on a HESPER survey, as well as the HESPER Scale itself.

This Manual is an invaluable tool for anyone concerned with planning and monitoring assistance to people in humanitarian settings.

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